

HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

United States of America, COLORADO

United B S16-20-14N

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 S16-20-14N 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 25 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 #: 3909337		Quote #:		Sales Order #: 0906524164				
Customer: EXTRACTION OIL & GAS-EBUS				Customer Rep: Manny Parras						
Well Name: UNITED B			Well #: S16-20-14N			API/UWI #: 05-014-20814-00				
Field: WATTENBERG		City (SAP): BROOMFIELD		County/Parish: BROOMFIELD		State: COLORADO				
Legal Description: NE NE-9-1S-68W-489FNL-928FEL										
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		1630ft		Job Depth TVD		1630				
				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		9.625	8.921	36			0	1630	0	1630
Open Hole Section			13.5				0	1635	0	1635
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
						Top Plug	9.625	1	HES	
Float Shoe	9.625	1	Topco	1630						
Float Collar	9.625	1	Topco	1586						
						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			4	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	SwiftCem	SWIFTCEN (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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	123	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:		63 °F
Cement Temperature:			Plug Displaced by:		8.33 lb/gal Fresh Water		Disp. Temperature:		63 °F
Plug Bumped?		Yes	Bump Pressure:		580 psi		Floats Held?		Yes
Cement Returns:		25 bbl	Returns Density:				Returns Temperature:		
Comment Plug bumped at calculated, final circulating pressure of 580 psi, floats held, .5 bbl back, 25 bbl of cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

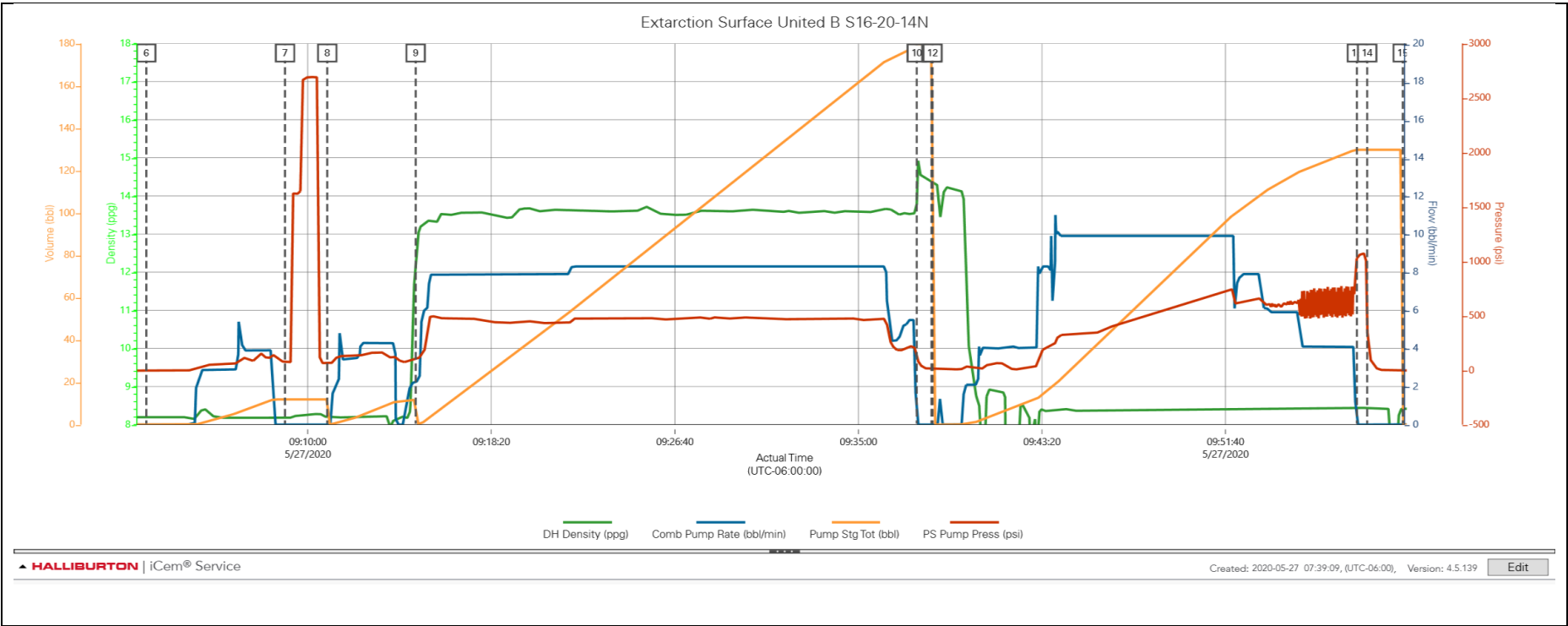
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	5/27/2020	01:00:00	USER					CREW CALLED OUT AT 1:00 5/27/2020, REQUESTED ON LOCATION 10:00 5/27/2020. CREW PICKED UP CEMENT, 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 11562546/11633848 PUMP RED TIGER: 12645765.
Event	2	Arrive At Loc	Arrive At Loc	5/27/2020	07:00:00	USER					CREW HAULED CEMENT IN BETWEEN JOBS. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 1630', 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	5/27/2020	08:30:00	USER	8.20	0.00	0.00	-6.00	HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	4	Rig-Up Equipment	Rig-Up Equipment	5/27/2020	08:45:00	USER	8.19	0.00	0.00	-5.00	CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.

Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/27/2020	08:50:00	USER	8.20	0.00	0.00	-4.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	6	Start Job	Start Job	5/27/2020	09:02:40	COM10	8.19	0.00	0.00	-3.00	START JOB DATA RECORDING.
Event	7	Test Lines	Test Lines	5/27/2020	09:08:58	COM10	8.19	0.00	11.90	75.00	PRESSURE TESTED IRON TO 2700 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 480 PSI, 5TH GEAR STALL OUT @1650 PSI.
Event	8	Pump Spacer 1	Pump Spacer 1	5/27/2020	09:10:53	COM10	8.21	0.00	11.90	60.00	PUMP 10 BBL OF FRESH WATER WITH RED DYE.
Event	9	Pump Lead Cement	Pump Lead Cement	5/27/2020	09:14:54	COM10	12.28	2.20	11.90	101.00	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	5/27/2020	09:37:39	COM10	13.78	0.00	178.80	120.00	SHUTDOWN TO DROP TOP PLUG.
Event	11	Drop Top Plug	Drop Top Plug	5/27/2020	09:38:19	COM10	14.36	0.00	178.80	8.00	PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	12	Pump Displacement	Pump Displacement	5/27/2020	09:38:22	COM10	14.35	0.00	178.80	8.00	BEGIN PUMPING 123 BBL OF FRESH WATER DISPLACEMENT.
Event	13	Bump Plug	Bump Plug	5/27/2020	09:57:38	COM10	8.43	0.00	129.80	1034.00	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 580 PSI. 25 BBL OF CEMENT BACK TO SURFACE.

Event	14	Check Floats	Check Floats	5/27/2020	09:58:06	USER	8.44	0.00	129.80	473.00	RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, .5 BB BACK.
Event	15	End Job	End Job	5/27/2020	09:59:43	COM10	8.43	0.00	0.00	-3.00	END JOB DATA RECORDING.
Event	16	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/27/2020	15:00:00	USER					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	17	Rig-Down Completed	Rig-Down Completed	5/27/2020	15:10:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.


3.0 Attachments

3.1 Extarction Surface United B S16-20-14N-Custom Results.png



3.2 Extarction Surface United B S16-20-14N-Custom Results (1).png

Extarction Surface United B S16-20-14N						
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	09:02:40	8.19	0.00	0.00	-3.00	
7 Test Lines	09:08:58	8.19	0.00	11.90	75.00	
8 Pump Spacer 1	09:10:53	8.21	0.00	11.90	60.00	
9 Pump Lead Cement	09:14:54	12.28	2.20	11.90	101.00	
10 Shutdown	09:37:39	13.78	0.00	178.80	120.00	
11 Drop Top Plug	09:38:19	14.36	0.00	178.80	8.00	
12 Pump Displacement	09:38:22	14.35	0.00	178.80	8.00	
13 Bump Plug	09:57:38	8.43	0.00	129.80	1034.00	
14 Check Floats	09:58:06	8.44	0.00	129.80	473.00	
15 End Job	09:59:43	8.43	0.00	0.00	-3.00	

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