

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Trott 7W-20-16N Production

Sincerely,
Meghan Jacobs

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 **Trott 7W-20-16N** cement **Production** 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 35bbls of cement 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3833882	Quote #:	Sales Order #: 0904859843							
Customer: EXTRACTION OIL & GAS		Customer Rep: Danny Herrera								
Well Name: TROTT	Well #: 7W-20-16N	API/UWI #: 05-123-45707-00								
Field: WATTENBERG	City (SAP): MEAD	County/Parish: WELD	State: COLORADO							
Legal Description: NE SE-7-4N-68W-1548FSL-1020FEL										
Contractor:		Rig/Platform Name/Num: Patterson 901								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Prince Perez								
Job										
BHST										
Job depth MD	15,901ft	Job Depth TVD	4,955'							
		Wk Ht Above Floor	5'							
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		J-55	0	1594	0	1594
Casing	0	5.5	4.778	20	BTC	P-110	0	15901	0	4955
Open Hole Section			8.5				1594	15910	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5	1	KLX	15,901		Top Plug	5.5	1	KLX	
Float Shoe	5.5	1	KLX	15,901						
Float Collar	5.5	1	KLX	15,897						
						Plug Container	5.5	1	HES	
						Centralizers	5.5			
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	Spacer	Tuned Spacer III	50	bbl	11.5	3.73	23.4	3	1,761.22	
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	Lead	ELASTICEM (TM) SYSTEM	2,700	sack	13.2	1.57	7.54	8	20,358	

last updated on 5/23/2018 9:28:25 AM

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid
3	Displacement	Fresh Water	352.9	bbl	8.33			8	
Cement Left In Pipe		Amount	0		Reason			Wet Shoe	
Mix Water:pH 7		Mix Water Chloride:<500 ppm			Mix Water Temperature:64 °F				
Cement Temperature:## °F		Plug Displaced by:8.33 lb/gal			Disp. Temperature:64 °F				
Plug Bumped?Yes		Bump Pressure:2,353 psi			Floats Held?Yes				
Cement Returns:35.5 bbl		Returns Density:13.2 lb/gal			Returns Temperature:## °F				
Comment 50 BBLS of Tuned Spacer, 755 bbls of elasticem, 352.9 bbls of freshwater displacement. 35 bbls of cement back.									

2.0 Real-Time Job Summary

2.1 Job Event Log

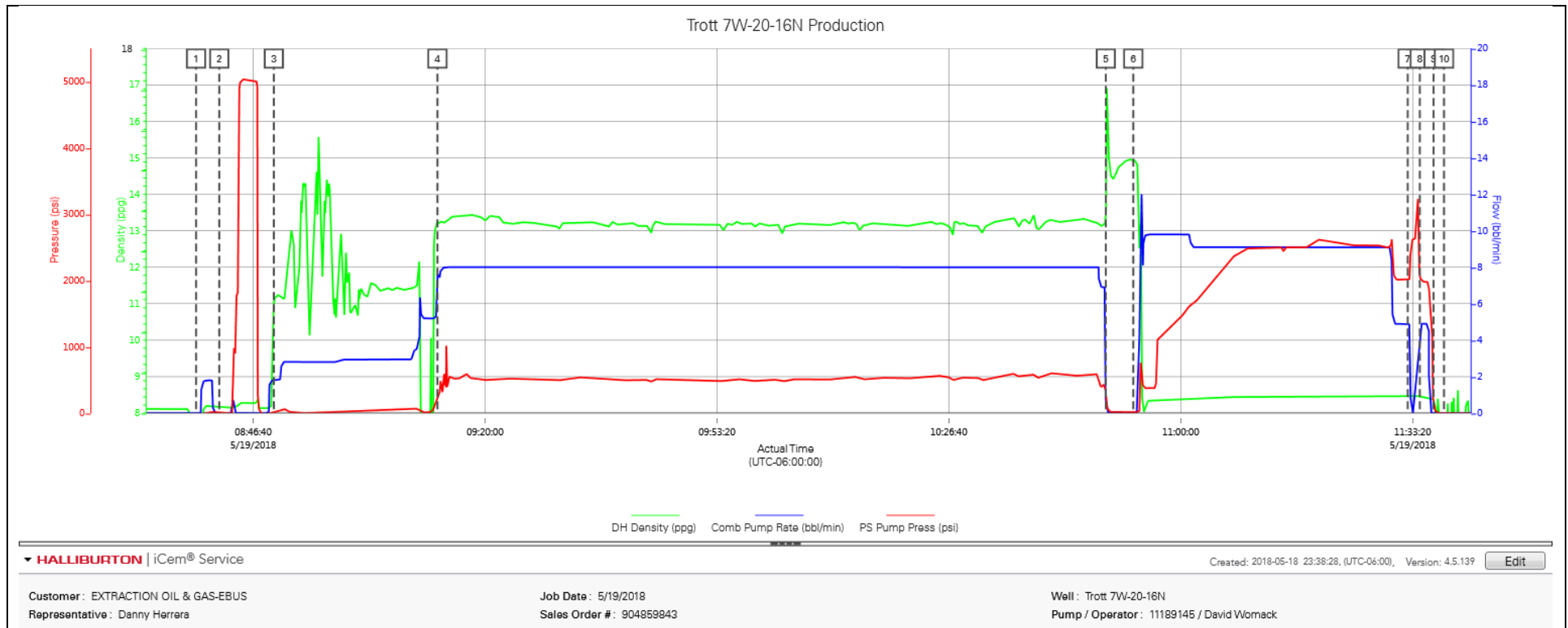
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	5/18/2018	21:45:00	USER				CREW CALLED OUT AT 21:45, REQUESTED ON LOCATION 3:30. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 11566182, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/19/2018	00:50:00	USER				CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	5/19/2018	01:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	5/19/2018	01:45:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,594', 5.5" CASING: 20 LB/FT TOTAL 15,901', 8.75" HOLE, TD 15,910', 4' SHOE TRAC, TVD- 4955'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 08:00 05/19/2018.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	5/19/2018	01:55:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/19/2018	02:10:00	USER				RIG UP BULK AND MIXING EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	5/19/2018	03:30:00	USER				STOPPED AROUND THE 40FT BUFFER ZONE. FINISHED RIG UP AFTER CASING LANDED.
Event	8	Safety Meeting - Pre Job	Safety Meeting - Pre Job	5/19/2018	08:20:00	USER	8.12	0.00	-21.00	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	9	Start Job	Start Job	5/19/2018	08:38:27	COM4	0.00	0.00	-23.00	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	5/19/2018	08:41:47	COM4	8.19	0.00	-4.00	PRESSURE TESTED IRON TO 5,000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,000 PSI, 5TH GEAR STALL OUT @ 1,830 PSI. 5,000 PRESSURE TEST KICKED OUT @ 5,000 PSI
Event	11	Pump Spacer	Pump Spacer	5/19/2018	08:49:38	USER	11.04	1.80	16.00	PUMP 50 BBLs OF TUNED SPACER III @ 11.5 LB/GAL, 10

GALS D-AIR. 50 BBLS CALCULATED TO RETURN. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 3 BBLS/MIN @ 33 PSI.

Event	12	Pump Lead Cement	Pump Lead Cement	5/19/2018	09:13:09	COM4	13.15	7.60	211.00	PUMPED 2700 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 FT3/SK, 7.54 GAL/SK. 755 BBLS, 35 BBLS CALCULATED TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 490 PSI
Event	13	Drop Top Plug	Drop Top Plug	5/19/2018	10:49:13	USER	13.21	0.00	185.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	14	Pump Displacement	Pump Displacement	5/19/2018	10:53:10	COM4	14.93	0.00	11.00	BEGIN CALCULATED DISPLACEMENT OF 352.9 BBLS WITH FRESH WATER. PUMP RATE 9 BPM @ 2,500 PSI
Event	15	Bump Plug	Bump Plug	5/19/2018	11:32:37	USER	8.44	4.90	2013.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,353 PSI PRESSURED 500 PSI OVER BUMP.
Event	16	Shift Tool - Lower	Shift Tool - Lower	5/19/2018	11:34:22	USER	8.45	4.90	2065.00	TOOL SHIFTED @ 3,220 PSI FOLLOWED BY 5 BBLS WET SHOE.
Event	17	Check Floats	Check Floats	5/19/2018	11:36:20	USER	8.38	0.00	146.00	RELEASED PRESSURE, FLOATS HELD, 1.5 BBLS BACK.
Event	18	End Job	End Job	5/19/2018	11:37:50	COM4	7.52	0.00	-2.00	STOP RECORDING JOB DATA.
Event	19	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	5/19/2018	11:40:00	USER	7.45	0.00	-2.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	20	Rig Down Lines	Rig down started	5/19/2018	11:50:00	USER				RIG DOWN BULK AND MIXING EQUIPMENT.
Event	21	Rig-Down Completed	Rig-Down Completed	5/19/2018	12:50:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/19/2018	13:50:00	USER				CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	5/19/2018	14:00:00	USER				THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

3.1 Trott 7W-20-16N Production – Job Chart with Events



3.2 Trott 7W-20-16N Production – Job Chart without Events

