

HALLIBURTON

iCem[®] Service

TRUE OIL LLC

Hagar 5-64 15-16-1BZ 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 **Hagar 5-6415-16-1BHZ** 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 98bbbls 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 #: 306116	Ship To #: 3791456	Quote #: 0022462666	Sales Order #: 0904980240							
Customer: TRUE OIL LLC		Customer Rep: Mark Stoner								
Well Name: HAGAR	Well #: 5-64 15-16-1BHZ	API/UWI #: 05-005-07268-00								
Field: WILDCAT	City (SAP): AURORA	County/Parish: ARAPAHOE	State: COLORADO							
Legal Description: NE SE-15-5S-64W-2180FSL-440FEL										
Contractor: TRUE DRLG		Rig/Platform Name/Num: TRUE 33								
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HB41307		Srv Supervisor: Thomas Haas								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	17957ft	Job Depth TVD	7750'							
Water Depth		Wk Ht Above Floor	6'							
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	LTC	J-55	0	2148	0	0
Casing	0	5.5	4.778	20	GB CD	P-110	0	17957	0	0
Open Hole Section			8.5				2148	17961	2148	7752
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	KLX	
Float Shoe	5.5	1		17957		Bottom Plug	5.5			
Float Collar	5.5	1		17934		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					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	Tuned Spacer III	Tuned Spacer III	60	bbl	12	3.16	19.3	5	2057	
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	ElastiCem (Cap)	ELASTICEM (TM) SYSTEM	370	sack	13.2	1.57	7.53	8	2786	

last updated on 7/11/2018 2:27:45 PM

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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 Gal
3	ElastiCem (Super CBL)	ELASTICEM (TM) SYSTEM	730	sack	13.2	1.57	7.53	8	5497
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
4	NeoCem	NeoCem TM	1485	sack	13.2	2.04	9.75	8	14478
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
5	MMCR Displacement	MMCR Displacement	20	bbl	8.4			8	
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
6	Displacement Fluid	Displacement Fluid	378	bbl	8.4			8	
Cement Left In Pipe		Amount	20 ft			Reason		Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		<300 ppm		Mix Water Temperature:		76 °F
Cement Temperature:		N/A	Plug Displaced by:		8.33 lb/gal F.W.		Disp. Temperature:		76 °F
Plug Bumped?		Yes	Bump Pressure:		2300 psi		Floats Held?		Yes
Cement Returns:		98 bbl	Returns Density:		NA		Returns Temperature:		N/A
Comment The plug bumped @ calculated displacement @ 2300 PSI, shutdown for 10 minutes @ 2900 PSI. Checked the floats, the floats held and received 4 BBLS back to the truck , 98 bbl cement returned 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)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	7/10/2018	12:00:00	USER				CREW CALLED OUT AT 12:00 7/10/2018, REQUESTED ON LOCATION 18:00 7/10/2018. CREW PICKED UP CEMENT, CHEMICALS (35 GAL MUSOL A, 35 GAL DUAL SPACER B, 20 GAL D-AIR, 20 GAL MMCR), 200 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 11255351/11689672, BULK 660: 11610427/10924982, PUMP ELITE 11897034/11645460.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/10/2018	16:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	7/10/2018	17:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	7/10/2018	18:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 2148', CASING: 5.5" 20# @ 17957', 23' SHOE JOINT, 8.5" OPEN HOLE, TVD @ 7750', 9.6 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/10/2018	18:10:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	7/10/2018	18:20:00	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	7/10/2018	19:30:00	USER	8.45	0.00	1.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	7/10/2018	19:59:29	COM4	8.36	0.00	1.00	START JOB DATA RECORDING.
Event	9	Test Lines	Test Lines	7/10/2018	20:02:14	COM4	8.36	0.00	2.00	PRESSURE TESTED IORN TO 4800 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 400 5TH GEAR STALL OUT @ 1870 PSI.
Event	10	Pump Spacer	Pump Spacer	7/10/2018	20:14:38	USER	12.32	1.90	165.00	PUMP 60 BBLS OF TUNED SPACER @ 12 LB/GAL, ADDED 35 GAL MUSOL A, 35 GAL DUAL SPACER B, 20 GAL D-AIR,

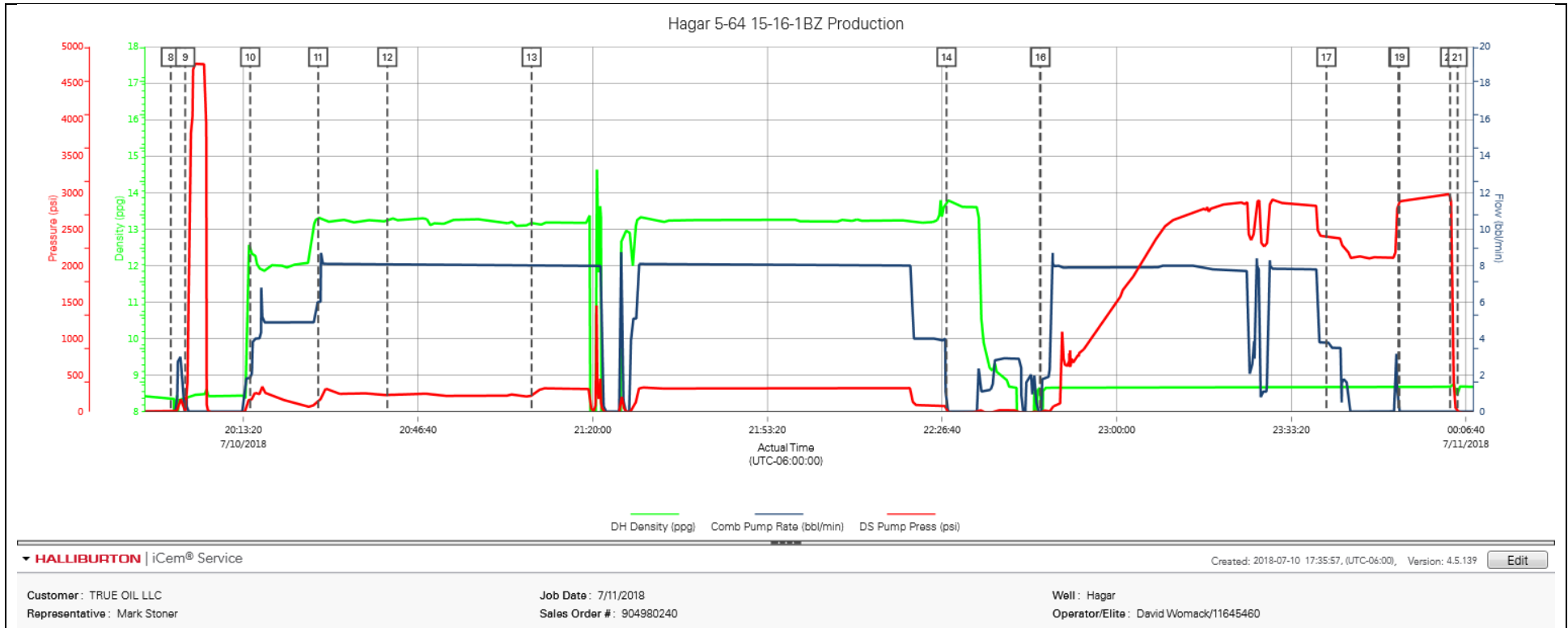
DENSITY VERIFIED BY PRESSURIZED MUD SCALES.

Event	11	Pump Cap Cement	Pump Cap Cement	7/10/2018	20:27:36	COM4	13.40	6.00	159.00	PUMP 370 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.53 GAL/SK, 103 BBLs, CALCULATED TOC @ SURFACE', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Pump Lead Cement	Pump Lead Cement	7/10/2018	20:40:48	COM4	13.19	8.10	228.00	PUMP 730 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.53 GAL/SK, 204 BBLs, CALCULATED TOL @ 81', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Tail Cement	Pump Tail Cement	7/10/2018	21:08:20	COM4	13.23	8.00	218.00	PUMP 1485 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 YIELD, 9.75 GAL/SK, 540 BBLs, CALCULATED TOT @ 4781', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	7/10/2018	22:27:31	USER	13.81	0.00	12.00	SHUT DOWN TO CLEAN PUMPS LINES, LOAD TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	7/10/2018	22:45:22	COM4	8.66	0.00	-21.00	PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.
Event	16	Pump Displacement	Pump Displacement	7/10/2018	22:45:28	COM4	8.66	0.00	-22.00	BEGIN CALCULATED DISPLACEMENT 398 BBL FRESH WATER. 10 GAL MMCR IN FIRST 20 BBL, 5 GAL CLA-WEB, 3LBS BE-3 TROUGH OUT THE REST.
Event	17	Other	Cement To Surface	7/10/2018	23:40:02	COM4	8.68	3.80	2415.00	CEMENT RETURNED TO SURFACE 300 BBL INTO DISPLACEMENT, 98 BBL CEMENT TO SURFACE
Event	18	Bump Plug	Bump Plug	7/10/2018	23:53:46	COM4	8.70	0.00	2885.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE OF 2300 PSI.
Event	19	Other	Casing Test	7/10/2018	23:53:58	COM4	8.69	0.00	2883.00	10 MIN CASING TEST AT 2900 PSI.
Event	20	Other	Check Floats	7/11/2018	00:03:39	COM4	8.68	0.00	2986.00	RELEASED PRESSURE BACK TO THE TRUCK FLOATS HELD 4 BBL BACK.
Event	21	End Job	End Job	7/11/2018	00:05:04	COM4	8.67	0.00	4.00	STOP JOB DATA RECORDING
Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/11/2018	00:10:00	USER	8.67	0.00	-19.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	23	Rig-Down Completed	Rig-Down Completed	7/11/2018	01:00:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.
Event	24	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/11/2018	01:15:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	25	Crew Leave Location	Crew Leave Location	7/11/2018	01:30:00	USER				THANK YOU FOR USING HALLIBURTON - THOMAS HAAS

AND CREW.

3.0 Attachments

3.1 Hagar 5-64 15-16-1BZ Production – Job Chart with Events



3.2 Hagar 5-64 15-16-1BZ Production – Job Chart with Events

