

HALLIBURTON

iCem[®] Service

VERDAD OIL & GAS

Timbro 9-59 8B-9-8 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 **Timbro 9-59 8B-9-8** 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 15 bbls of spacer 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 #: 380688		Ship To #: 3899041		Quote #:		Sales Order #: 0905775640				
Customer: VERDAD RESOURCES LLC					Customer Rep: TIM ALANIZ					
Well Name: TIMBRO 9-59			Well #: 8B-9-8			API/UWI #: 05-123-47572-00				
Field: WILDCAT		City (SAP): KEOTA		County/Parish: WELD			State: COLORADO			
Legal Description: SW SW-8-9N-59W-1247FSL-600FWL										
Contractor: H & P DRLG					Rig/Platform Name/Num: H & P 290					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Nikolaus Kornafel					
Job										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type					BHST					
Job depth MD		16295ft			Job Depth TVD					
Water Depth					Wk Ht Above Floor					
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	1901	0	1901
Casing		5.5	4.778	20			0	16295	0	0
Open Hole Section			8.5				1901	16305	1901	6212
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5	1		16295		Top Plug	5.5	1	WTHRFRD	
						Bottom Plug	5.5	1	WTHRFRD	
Float Collar	5.5	1		16245		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	FDP SPACER	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbbl	12.5	2.79	16.7	4	
2	FDP SPACER	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbbl	12.5	2.71	16.0	4	
3	Lead Cement	ELASTICEM (TM) SYSTEM	575	sack	13.2	1.57	7.55	8	4,341
4	Tail Cement	NeoCem TM	1,200	bbbl	13.2	2.04	9.75	8	11,700
5	MMCR Displacement	MMCR Displacement	360	bbbl	8.34			8	
Cement Left In Pipe									
Amount		0 ft			Reason			Wet Shoe	
Mix Water:	pH 7	Mix Water Chloride:	0 ppm		Mix Water Temperature:	62 °F			
Cement Temperature:	N/A	Plug Displaced by:	8.33 lb/gal		Disp. Temperature:	62 °F			
Plug Bumped?	Yes	Bump Pressure:	2750 psi		Floats Held?	Yes			
Cement Returns:	0 bbl	Returns Density:	N/A		Returns Temperature:	N/A			
Comment PUMPED 100 BBLS OF SPACER FOLLOWED BY 161 BBLS OF LEAD CEMENT CEMENT FOLLOWED BY 436 BBLS OF TAIL CEMENT, DISPLACED BY 360 BBLS OF FRSH WATER. CHECKED FLOATS, FLOATS HLED, 2 BBLS BACK TO THE TRUCK. 15 BBLS OF SPACER 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	6/18/2019	14:17:00	USER				CREW CALLED OUT AT 14:30, REQUESTED ON LOCATION 19:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 11764054, BULK 660 11633848, AND PUMP 11360070.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/18/2019	17:00:00	USER				CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	6/18/2019	17:15:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/18/2019	17:20:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	6/18/2019	17:30:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Arrive at Location from Service Center	Arrive at Location from Service Center	6/18/2019	19:15:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,901, 5.5" CASING: 20 LB/FT TOTAL 16,295', 8.5" HOLE, TD 16,305', SHOE TRAC- 50', TVD- 6,212'. PUMP FRESH WATER DISPLACEMENT 360 BBLs. CASING LANDED @ 18:30 06/18/2019. RIG CIRCULATED BOTTOMS UP.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	6/18/2019	21:15:00	USER	8.49	0.00	74.00	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
Event	8	Start Job	Start Job	6/18/2019	21:31:43	COM5	8.51	0.00	74.00	BEGIN RECORDING JOB DATA.
Event	9	Test Lines	Test Lines	6/18/2019	21:40:03	COM5	8.67	0.00	155.00	PRESSURE TESTED IRON TO 6,000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 900 PSI, 5TH GEAR STALL OUT @ 2,100 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	6/18/2019	21:43:52	COM5	8.73	0.00	107.00	PUMPED 50 BBLs OF FDP SPACER WITH DRY ADDITIVES @ 12.5 LB/GAL, 2.79 FT3/SK, 16.7 GAL/SK 10 GALLONS D-

AIR. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
 PUMP RATE 4 BBL/MIN @ 440 PSI.

Event	11	Check Weight	Check Weight	6/18/2019	21:48:51	COM5	12.94	4.20	371.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Check Weight	Check Weight	6/18/2019	21:52:03	COM5	12.54	6.00	401.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Spacer 1	Pump Spacer 1	6/18/2019	21:57:53	COM5	12.51	6.30	258.00	PUMPED 50 BBL OF FDP SPACER @ 12.5 LB/GAL, 2.71 FT3/SK, 16.0 GAL/SK 10 GALLONS D-AIR. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 4 BBL/MIN @ 440 PSI.
Event	14	Drop Bottom Plug	Drop Bottom Plug	6/18/2019	22:05:04	COM5	12.06	1.70	91.00	BOTTOM PLUG LEFT PLUG CONTAINER
Event	15	Pump Lead Cement	Pump Lead Cement	6/18/2019	22:05:12	COM5	12.02	1.70	91.00	PUMPED 575 SKS OF ELASTICEM LEAD CEMENT @ 13.2 LB/GAL, 1.57 FT3/SK, 7.55 GAL/SK. 160.78 BBL, HOL @ 3,906.69' TOL @ 1,702.04'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBL/MIN @ 680 PSI.
Event	16	Check Weight	Check Weight	6/18/2019	22:08:46	COM5	13.18	3.10	146.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	17	Pump Tail Cement	Pump Tail Cement	6/18/2019	22:31:23	COM5	13.06	8.00	359.00	PUMP 1,200 SKS OF NEOCEM TAIL CEMENT @ 13.2 LB/GAL, 2.04 FT3/SK, 9.75 GAL/SK, 435.99 BBL. HOT CALCULATED @ 10,686.27', TOT CALCULATED @ 5,608.73'. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBL/MIN @ 650 PSI.
Event	18	Check Weight	Check Weight	6/18/2019	22:32:43	COM5	13.10	8.00	506.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	19	Check Weight	Check Weight	6/18/2019	22:43:08	COM5	13.24	8.10	567.00	DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	20	Shutdown	Shutdown	6/18/2019	23:29:28	COM5	13.21	0.00	171.00	SHUTDOWN TO WASH LINES
Event	21	Drop Top Plug	Drop Top Plug	6/18/2019	23:39:40	COM5	8.05	0.00	70.00	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	22	Pump Displacement	Pump Displacement	6/18/2019	23:39:43	COM5	8.05	0.00	70.00	BEGIN CALCULATED DISPLACEMENT OF 360 BBL WITH FRESH WATER. 10 GAL OF MCMR IN THE FIRST 20 BBL.
Event	23	Bump Plug	Bump Plug	6/19/2019	00:48:18	COM5	8.39	0.00	2648.00	SPACER TO SURFACE @ 345 BBL INTO DISPLACEMENT. 15 BBL OF TUNED SPACER TO SURFACE. PLUG BUMPED AT CALCULATED DISPLACEMENT. 2,250 PSI PRESSURED UP 500 PSI OVER FINAL CIRCULATING PRESSURE TO 2,750 PSI

Event	24	Pressure Up Well	Pressure Up Well	6/19/2019	00:48:40	COM5	8.39	0.00	2671.00	PRESSURED UP WELL TO 3,800 PSI TO SHIFT THE WET SHOE SUB AND PUMPED A 5 BBL WET SHOE
Event	25	Other	Other	6/19/2019	00:51:17	COM5	8.34	0.00	1937.00	RELEASED PRESSURE, FLOATS HELD, 2.0 BBLS BACK.
Event	26	End Job	End Job	6/19/2019	00:52:57	COM5	8.14	0.00	85.00	STOP RECORDING JOB DATA.
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/19/2019	01:00:00	USER	8.33	0.00	78.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	28	Rig-Down Completed	Rig-Down Completed	6/19/2019	02:00:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	29	Safety Meeting - Departing Location	Safety Meeting - Departing Location	6/19/2019	03:00:00	USER				CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.

3.0 Attachments

3.1 Timbro 9-59 8B-9-8 Production – Job Chart

