

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC

Date: Sunday, June 16, 2019

Timbro 9-59 8B-9-4 Production

Job Date: Thursday, June 13, 2019

Sincerely,
Bryce Hinsch

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 **Timbro 9-59 8B-9-4** 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.

No cement was returned to surface. Estimated cement top is at 1,721'.

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 #: 3899017	Quote #:	Sales Order #: 0905760402
Customer: VERDAD RESOURCES LLC		Customer Rep: Jason Hansen	
Well Name: TIMBRO 9-59		Well #: 8B-9-4	API/UWI #: 05-123-47581-00
Field: WILDCAT	City (SAP): KEOTA	County/Parish: WELD	State: COLORADO
Legal Description: NW SW-8-9N-59W-1359FSL-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: Nicholas Cummins	

Job

Formation Name				
Formation Depth (MD)	Top	1888ft	Bottom	16301ft
Form Type			BHST	
Job depth MD	16291ft	Job Depth TVD		6212ft
Water Depth			Wk Ht Above Floor	4ft
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	1888	0	1888
Casing		5.5	4.778	20			0	16291	0	0
Open Hole Section			8.5				1888	16301	1888	6212

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5	1		16291	Top Plug	5.5	1	WTHR
Float Shoe	5.5				Bottom Plug	5.5	1	WTHR
Wet Shoe Sub	5.5	1		16184	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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbbl	12.5	2.79	16.5	4		
2	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbbl	12.5	2.71	16	4		
3	ElastiCem	ELASTICEM (TM) SYSTEM	580	sack	13.2	1.57	7.55	8		
0.30 %		SCR-100 (100003749)								
4	NeoCem	NeoCem TM	434.2	bbbl	13.2	2.04	9.75	8		
9.75 Gal		FRESH WATER								
5	MMCR Displacement	MMCR Displacement	20	bbbl	8.34			10		
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)								
6	Displacement		339	bbbl	8.34			8		
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe		

Mix Water:	pH 7	Mix Water Chloride:	<400 ppm	Mix Water Temperature:	64 °F
Cement Temperature:	64 °F	Plug Displaced by:	8.33 lb/gal	Disp. Temperature:	64 °F
Plug Bumped?	Yes	Bump Pressure:	1870 psi	Floats Held?	Yes
Cement Returns:	0 bbl	Returns Density:	N/A	Returns Temperature:	N/A

Comment

100 bbls spacer

162 bbls Lead Cement

434 bbls Tail Cement

359 bbls Displacement

2 bbls back to truck floats held

Estimated Top of Lead cement 1,721'

Estimated top of Tail cement 5,654'

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	6/12/2019	12:30:00	USER					The crew was called out on 1/13/19 at 1200. The customer requested HES on location at 1800 on 1/13/19.
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/12/2019	17:15:00	USER					The crew held a pre journey safety meeting discussing the route and potential hazards while driving The supervisor called in a journey. The crew departed service center.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	6/12/2019	19:16:00	USER					The crew arrived on location safely. The rig was still running casing. The supervisor met with the Company man and received numbers. TD 16,301', TP 16,291' 5 1/2" 20# P-110, FC 19,964', PC 1,888' 9 5/8" 36# J-55, TVD 6,212', OH 8 1/2", Mud 9.9 ppg.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/12/2019	19:20:00	USER					Crew discussed all potential hazards on location.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/12/2019	19:35:00	USER					Crew held a safety meeting discussing the rig up procedure. Also all potential hazards associated with rigging up all HES equipment and lines.

Event	6	Rig-Up Equipment	Rig-Up Equipment	6/12/2019	19:45:00	USER					The crew rigged up all HES equipment and lines.
Event	7	Rig-Up Completed	Rig-Up Completed	6/12/2019	20:53:00	USER					Rig up completed, no one got hurt.
Event	8	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/13/2019	06:00:00	USER	-1.00	8.33	0.00	0.00	The crew and all personal involved with cement job discussed all potential hazards associated with job. Followed by the job procedure to ensure everyone understood the plan of action
Event	9	Start Job	Start Job	6/13/2019	06:36:00	COM1	6.00	8.36	0.00	0.00	Started recording data from Elite 11512092. Filled lines with 3 bbls of water at 2 bpm, pressure was at 183 psi.
Event	10	Test Lines	Test Lines	6/13/2019	06:42:51	COM1	6120.00	8.46	0.00	3.10	Pressure tested all HES lines 6,500 psi. The pressure test passed.
Event	11	Pump Spacer 1	Pump Spacer 1	6/13/2019	06:45:18	COM1	26.00	8.34	0.00	3.10	Pumped the first 50 bbls of Spacer with dry surfactants at 4 bpm, pressure was at 80 psi. 12.5 ppg 2.79 yield 16 gal/sk. Used pressurized scales to verify density. Pumped the second 50 bbls of Spacer with liquid surfactants at 4 bpm, pressure was at 86 psi. 12.5 ppg 2.71 yield 16.5 gal/sk. Used pressurized scales to verify density.
Event	12	Drop Bottom Plug	Drop Bottom Plug	6/13/2019	07:12:06	COM1	76.00	12.21	3.50	95.20	Cementer and Driller verified plug left container.
Event	13	Pump Lead Cement	Pump Lead Cement	6/13/2019	07:15:48	COM1	44.00	12.90	1.70	105.00	Pumped 162 bbls (580 sks) of Lead cement at 8 bpm,

											pressure was at 465 psi. 13.2 ppg 1.57 yield 7.55 gal/sk. Used pressurized scales to verify density.
Event	14	Pump Tail Cement	Pump Tail Cement	6/13/2019	07:39:23	COM1	405.00	12.96	8.30	138.50	Pumped 434 bbls (1195 sks) of Tail cement at 8 bpm, pressure was at 557 psi. 13.2 ppg 2.04 yield 9.75 gal/sk. Used pressurized scales to verify density.
Event	15	Shutdown	Shutdown	6/13/2019	08:44:01	COM1	33.00	13.02	0.00	396.90	Shutdown to wash pumps and lines. Blew air from rig floor to wash up tank. Then washed pumps and lines from truck to wash up tank.
Event	16	Drop Top Plug	Drop Top Plug	6/13/2019	09:02:23	COM1	28.00	8.11	0.00	411.90	Driller and cementer verified plug left container.
Event	17	Pump Displacement	Pump Displacement	6/13/2019	09:02:25	COM1	28.00	8.11	0.00	411.90	Pumped the calculated displacement of 359 bbls. At 10 bpm and adjusted rate as needed. With MMCR in the first 20 bbls and biocide thruught.
Event	18	Bump Plug	Bump Plug	6/13/2019	09:44:23	COM1	2576.00	8.13	0.00	355.80	Bumped the plug final circulating pressure was 1,870 psi. Brought pressure 500 over before shutting down.
Event	19	Shift Tool - Lower	Shift Tool - Lower	6/13/2019	09:49:21	USER	2759.00	8.13	0.10	355.80	Pressured up up at 2 bpm to 3,700 psi to shift wet shoe sub. Pumped at 5 bbl wet shoe at 5 bpm.
Event	20	Other	Check Floats	6/13/2019	09:52:06	COM1	1316.00	8.10	0.00	362.10	Bled pressure back to truck to check floats. Floats held 2 bbls back, floats held.
Event	21	End Job	End Job	6/13/2019	09:53:17	COM1	29.00	8.17	0.00	0.00	Cement job complete. Stopped recording job data

from Elite 11512092.
 Estimated top of Lead
 cement 1,721'. Estimated
 top of Tail cement 5,654'.

Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/13/2019	09:55:00	USER	32.00	8.10	0.00	0.00	Crew held a safety meeting discussing the rig down procedure. Also all potential hazards associated with rigging down all HES equipment and lines.
Event	23	Rig-Down Equipment	Rig-Down Equipment	6/13/2019	10:10:00	USER					The crew rigged down all HES equipment and lines.
Event	24	Rig-Down Completed	Rig-Down Completed	6/13/2019	11:00:00	USER					Rig down completed no one got hurt.
Event	25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/13/2019	11:20:00	USER					The crew held a pre journey safety meeting discussing the route and potential hazards while driving The supervisor called in a journey.
Event	26	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/13/2019	11:30:00	USER					Nick Cummins and crew would like to thank you for your business, and choosing Halliburton Cement! Please feel free to call if you have any questions.

3.0 Attachments

3.1 Verdad Timbro 9-59 8B-9-4 Production Chart

