

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC-EBUS

Timbro Fed 1931 08H

Production Casing

Job Date: Friday, April 29, 2022

Sincerely,

Brandon Parker

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 Fed 1931 08H production 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 35 bbl. 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 #: 380688		Ship To #: 9051853		Quote #:		Sales Order #: 0907830082				
Customer: VERDAD RESOURCES LLC-EBUS					Customer Rep: Steve Wilson					
Well Name: TIMBRO FED 1931			Well #: 08H			API/UWI #: 05-123-51206-00				
Field: WILDCAT		City (SAP): RAYMER		County/Parish: WELD			State: COLORADO			
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Brandon Parker					
Job										
Job depth MD		16906ft			Job Depth TVD		5885ft			
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	1600	0	1600
Casing		5.5	4.778	20			0	16906	0	5885
Open Hole Section			8.5				1600	16942	1600	5885
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Float Shoe	5.5	1		16906		Top Plug	5.5	1	HES	
Float Collar	5.5	1		16861		Bottom Plug	5.5	1	HES	
						Plug Container	5.5	1	HES	
						Centralizers	5.5	178		

Fluid Data										
Stage #: 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 Prime Cement Spacer	100	bbl	11.5	3.83		6	3539	
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 Cement	ElastiCem	1085	sack	13.2	1.57	7.52	9	8159	
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	Tail Cement	NeoCem	1420	sack	13.2	1.76	8.38	9	11900	
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	Displacement	Fresh Water with MMCR	40	bbl	8.33	0	0	10	1660	
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	Displacement	Treated Fresh Water	334	bbl	8.33	0	0	8	14018	
Cement Left In Pipe										
Amount		55 ft			Reason			Shoe Joint		
Mix Water:		pH 6		Mix Water Chloride:		0 ppm		Mix Water Temperature:		60°F
Plug Bumped?		Yes		Plug Displaced by:		8.33		Disp. Temperature:		60°F
Cement Returns:		35 bbl.		Bump Pressure:		2048 psi		Floats Held?		Yes
Comment: 100 bbl. spacer to surface, 35 bbl. of lead cement to surface and floats held 3.5 bbl. back to the unit										

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq. No.	Activity	Date	Time	Comments
1	Call Out	4/28/2022	15:00:00	hes crew called out to 5.5 production. On location time 19:30
2	Pre-Convoy Safety Meeting	4/28/2022	18:15:00	meeting with all HES personnel to discuss route of travel and safety/hazards associated with traveling to location.
3	Depart from Service Center or Other Site	4/28/2022	18:30:00	depart from previous job
4	Arrive at Location from Service Center	4/28/2022	19:35:00	arrived location. met with Mr. Steve Wilson with Verdad and went over job numbers, water sources and iron placement.
5	Assessment Of Location Safety Meeting	4/28/2022	19:36:00	checked silos for required cmt volumes, checked water upright volumes and tested water in both uprights. chlo 0, water temp 60 deg, ph 6. TD 16942, TP 16906.31, SP 1600, SJ 54.69FT, FC 16861, TVD 5885, EOB 6797, KOP 5684, 9.625 36# surface casing, 5.5" 20# Casing, MW 9.8ppg, OH 8.5", Cnt used 178, HES T & B Plug, Weatherford float equipment.
6	Safety Meeting - Pre Rig-Up	4/28/2022	19:45:00	meeting with HES personnel to discuss safety/hazards associated with rigging up hes equipment
7	Rig-Up Equipment	4/28/2022	20:00:00	rig up iron to stand pipe, rig up cmt silos, rig up water to pumping unit
8	Casing on Bottom	4/28/2022	22:05:00	rig landed casing. TRK casing was the casing crew onsite
9	Rig-Up Equipment	4/28/2022	22:19:00	HES supervisor and Mr. Steve Wilson with Verdad loaded top and bottom HES plugs. HES supervisor stabbed plug container on casing so rig could begin circulation through HES 5.5" plug container
10	Circulate Well	4/28/2022	22:30:00	rig began circulating well at 9.5bpm, 10500strokes 975psi
11	General Standby Start	4/28/2022	22:32:00	HES went into standby mode while rig circulated well
12	General Standby End	4/29/2022	00:00:00	

13	Safety Meeting - Pre Job	4/29/2022	00:05:00	meeting with all personnel on location to discuss safety/hazards associated with job in hand. also covered job procedures. all personnel signed HES JSA
14	KO Mud Pumps	4/29/2022	00:16:00	ko rig mud pumps, run kelly hose for mud line to HES stand pipe
15	Start Job	4/29/2022	00:23:18	start recording real time data
16	Fill Lines FW	4/29/2022	00:24:00	pumped 3bbls of fw at 2bpm and top psi was 160.
17	Test Lines	4/29/2022	00:27:03	test eko on both pumps, 5th gear stall and tested lines to 5851, psi held solid
18	Pump Tuned Prime Spacer	4/29/2022	00:37:40	pumped 100bbls of tuned prime 11.5ppg, 3.83 yield and 24.17gal/sk. pumped at 6bpm and average psi was 300. calculated all 100 bbls of spacer to surface
19	Slow Rate	4/29/2022	00:49:32	HES slowed rate to drop bottom plug
20	Drop Bottom Plug	4/29/2022	00:54:09	dropped bottom plug witnessed by HES supervisor and Verdad company rep Steve Wilson
21	Pump Lead Cement	4/29/2022	00:54:33	pumped 303.4bbls lead cmt, 1085sks, 13.2ppg, 1.57 yield, 7.52gal/sk pumped at 9bpm and average psi was 600. weight confirmed using high psi mud scales, weight confirmed by hes supervisor and operator. wet sample left on location. calculated 46bbls to surface. total mw 8159, 70BC 7:02hrs
22	Slow Rate	4/29/2022	01:29:35	slowed rate to 7bpm before silo swap from lead to tail to assure silo was mt
23	Pump Tail Cement	4/29/2022	01:33:39	pumped 445bbls tail cmt, 1420sks, 13.2ppg, 1.76 yield, 8.38 gal/sk pumped at 9bpm and average psi was 700. weight confirmed using high psi mud scales, weight confirmed by hes supervisor and operator. calculated top of tail cmt 6028.86ft on a gauged hole. mw 11900gallons, 70BC 4:30hrs
24	Shutdown	4/29/2022	02:31:19	done pumping cmt
25	Clean Lines	4/29/2022	02:38:30	shut in valves to well on hes cmt plug container, opened wash up valve on top of plug container to 4 sided wash up tank. hes pumped 15bbls of fw to clean pump and lines of cmt.
26	Drop Top Plug	4/29/2022	02:48:39	dropped top plug witnessed by hes supervisor and Verdad company rep Mr. Steve Wilson
27	Pump FW Displacement	4/29/2022	02:49:28	pumped 374.3bbls of fw treated with 20gal of MMCR in the first 40bbls of displacement, 5 gallons of D-Air and 10 gallons MC MX 820-6. fc at 16861 X .0222(5.5" 20# factor)
28	Slow Rate	4/29/2022	03:27:00	slow rate at 350bbls to 4bpm to land plug

29	Bump Plug	4/29/2022	03:31:44	bumped plug at calculated volume 374.3bbls. 2048psi ko pump at 2800, psi climbed to 2910 and held. plug bump verified by MR. Steve with Verdad
30	Check Floats	4/29/2022	03:36:39	weatherford floats held, 3.5bbls back. confirmed by Mr. Steve and hes supervisor
31	End Job	4/29/2022	03:38:11	
32	Cement Returns to Surface	4/29/2022	03:40:00	rig took back 100bbls of spacer and 35bbls of lead cmt
33	Pre-Rig Down Safety Meeting	4/29/2022	03:42:00	meeting with all hes personnel to discuss safety/hazards associated with rigging down hes equipment
34	Rig-Down Equipment	4/29/2022	03:45:00	
35	Pre-Convoy Safety Meeting	4/29/2022	04:45:00	meeting with all hes personnel to discuss safety/hazards associated with traveling to call center
36	Depart Location for Service Center or Other Site	4/29/2022	05:00:00	
37	Other	4/29/2022	05:01:00	Thank You for Choosing Halliburton Cement. Parker and Crew. (970) 397-4969

3.0 Attachments

3.1 Job Chart

