

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC

County Line 3130-05H Production

Job Date: Sunday, February 13, 2022

Sincerely,

Meghan Van Zyl

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 **County Line 3130-05H** 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 35 bbls 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

Sold To #: 380688		Ship To #: 9051838		Quote #:		Sales Order #: 0907675516				
Customer: VERDAD RESOURCES LLC-EBUS						Customer Rep: Jason Hansen				
Well Name: COUNTY LINE				Well #: 3130-05H		API/UWI #: 05-123-51177-00				
Field: WATTENBERG		City (SAP): LOCHBUIE		County/Parish: WELD			State: COLORADO			
Legal Description: SW SE-31-1N-65W-340FSL-1715FEL										
Contractor: PRECISION DRLG					Rig/Platform Name/Num: PRECISION 464					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Nicholas Roles					
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		17783ft		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	2402	0	2402
Casing		5.5	4.67	23			0	17783	0	7493
Open Hole Section			8.5				2402	17783	2402	7493
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	HES	
Float Shoe	5.5			17772.8		Bottom Plug	5.5	1	HES	
Float Collar	5.5			17726.8		SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		HES	
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 Prime	TUNED PRIME CEMENT SPACER SYS	100	bbl	11.5	3.94		6		
Fluid Data										
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	ELASTICEM (TM) SYSTEM	1255	sack	13.2	1.6		9	7.66	

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal							
3	NeoCem	NeoCem TM	1180	sack	13.2	2.02		9	9.71							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal							
4	MMCR Displacement	MMCR Displacement	40	bbl	8.34			10								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal							
5	Displacement		353	bbl	8.34			10								
Cement Left In Pipe		Amount	46 ft	Reason			Shoe Joint									
Mix Water:		pH 7	Mix Water Chloride: >3000 ppm			Mix Water Temperature: 70 °F °C										
Cement Temperature: ## °F °C		Plug Displaced by: 8.33 lb/gal			Disp. Temperature: 70 °F °C											
Plug Bumped?		Yes	Bump Pressure: 3400 psi MPa			Floats Held? Yes										
Cement Returns: 35 bbl m3		Returns Density: ## lb/gal kg/m3			Returns Temperature: ## °F °C											
Comment Got 35bbls cement to surface. Estimated TOT-7381'.																

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Call Out	Call Out	2/12/2022	02:00:00					Called out by service coordinator for OL time of 0830. Customer called at ~0800 and pushed job back to 2030.
2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/12/2022	05:15:00					Discuss all hazards associated with journey, directions to destination, complete journey management if needed, and ensure all convoy is fit for duty.
3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	2/12/2022	05:30:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	Arrive at Location from Service Center	2/12/2022	06:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/12/2022	17:45:00					Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and closest emergency location as well as coordinates.
6	Rig-Up Equipment	Rig-Up Equipment	2/12/2022	18:00:00					Begin rig up with crew.
7	Rig-Up Completed	Rig-Up Completed	2/12/2022	19:00:00					Complete rig up for job to nearest point before red zone.
8	Other	Other	2/12/2022	19:15:00					Mix water test results- PH-7, Chlo-0, Temp-65F.

9	Safety Meeting - Pre Job	Safety Meeting - Pre Job	2/12/2022	20:00:00	7.98	0.00	-33.00	11.50	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.
10	Start Job	Start Job	2/12/2022	20:18:46	7.98	0.00	-11.00	0.00	Customer requested to use 10bbls and top out current well and next well.
11	Other	Other	2/12/2022	20:28:55	7.98	0.00	-15.00	0.00	
12	Pump Cement	Pump Cement	2/12/2022	20:30:40	8.04	0.00	-27.00	0.00	Pumped 5.5bbls in first well, seen cement to surface.
13	Check Weight	Check Weight	2/12/2022	20:35:06	13.25	0.40	-13.00	2.00	Weight verified with pressurized mud scales.
14	Shutdown	Shutdown	2/12/2022	20:43:53	14.07	0.00	-30.00	5.50	Swap lines to second well.
15	Other	Other	2/12/2022	20:59:43	13.04	0.40	-20.00	0.10	Pumped 2bbls to top out second well.
16	Shutdown	Shutdown	2/12/2022	21:06:03	13.44	0.00	-32.00	1.90	Shutdown, rig back up to wash up and clean up pump. Pumped total of 10bbls or 35sk of 13.2# lead cement.
17	Start Job	Start Job	2/12/2022	21:53:35	7.96	0.00	-28.00	22.60	TD-17788', TP-17772.8' 5.5" 20#, FC-17726.2', TVD-7515', OH-8.5", SURF-2402' 9.625" 36#, MUD-9.7#
18	Test Lines	Test Lines	2/12/2022	21:56:30	8.32	0.00	204.00	3.10	Pumped 3bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to perform 5th gear stall at 1452psi, continued to bring pressure up to 4500psi. Pressure stabilized and held with no leaks
19	Pump Spacer 1	Pump Spacer 1	2/12/2022	22:00:40	11.49	3.60	246.00	1.60	Pumped 100bbls 11.5# 3.94y 24.7g/s Tuned Prime 10g D-Air at 6bpm 225psi.
20	Check Weight	Check Weight	2/12/2022	22:04:47	11.43	4.70	258.00	16.90	Weight verified with pressurized mud scales.
21	Drop Bottom Plug	Drop Bottom Plug	2/12/2022	22:15:26	11.52	7.20	237.00	81.40	Dropped by HES supervisor, witnessed by company man.

22	Pump Lead Cement	Pump Lead Cement	2/12/2022	22:17:01	12.76	7.20	330.00	92.80	Pumped 1255sks or 357.6bbbls 13.2# 1.6y 7.66g/s Elasticem w/ CBL at 9bpm 520psi.
23	Check Weight	Check Weight	2/12/2022	22:54:02	13.30	9.10	416.00	319.60	Weight verified with pressurized mud scales.
24	Pump Tail Cement	Pump Tail Cement	2/12/2022	22:58:18	13.05	9.10	385.00	0.10	Pumped 1180sks or 424.5bbbls 13.2# 2.02y 9.71g/s Neocem at 9bpm 575psi.
25	Check Weight	Check Weight	2/12/2022	23:00:06	13.15	9.10	585.00	16.40	Weight verified with pressurized mud scales.
26	Check Weight	Check Weight	2/12/2022	23:33:17	13.17	9.10	952.00	316.90	Weight verified with pressurized mud scales.
27	Shutdown	Shutdown	2/12/2022	23:47:01	13.33	0.00	40.00	434.70	Pumped 5bbbls fresh water to clean through pumps and lines.
28	Drop Top Plug	Drop Top Plug	2/12/2022	23:54:38	7.96	0.00	-31.00	13.20	Dropped by HES supervisor, witnessed by company man.
29	Pump Displacement	Pump Displacement	2/12/2022	23:54:41	8.14	0.00	-30.00	0.00	Pumped 393bbbls fresh water with 20g MMCR in first 40bbbls and 3lbs BE-3 and 10gal MCMX throughout.
30	Bump Plug	Bump Plug	2/13/2022	00:48:42	8.31	0.00	3417.00	392.40	Slowed down to 4bpm at 360bbbls away, final circulating pressure-2850psi, bump pressure-3400psi.
31	Other	Other	2/13/2022	00:53:20	8.31	0.00	3525.00	392.40	Held pressure for 5min., continued to released pressure and got 4.5bbbls back to pump. Floats held.
32	End Job	End Job	2/13/2022	00:54:20	8.32	0.00	-9.00	392.40	Got 35bbbls cement to surface. Estimated TOT-7381'.
33	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/13/2022	01:00:00					Held safety meeting with crew prior to rig down, discussed possibility of trapped pressure, swing radius, slips trips and falls, pinch points and risks associated with rig down.
34	Rig Down Lines	Rig Down Lines	2/13/2022	01:10:00					Begin rig down
35	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/13/2022	01:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.

36	Rig-Down Completed	Rig-Down Completed	2/13/2022	01:45:00	Rig down complete with no injuries, spills or damage to equipment.
37	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/13/2022	02:00:00	Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Real Time iCem Job Chart

