

HALLIBURTON

iCem[®] Service

VERDAD RESOURCES LLC-EBUS

Ft. Lupton District, COLORADO

County Line 3130-02H Production

Job Date: Wednesday, February 02, 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 3130-02H** 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 43 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 #: 9048928		Quote #:		Sales Order #: 0907654276				
Customer: VERDAD RESOURCES LLC-EBUS						Customer Rep: Steve Wilson				
Well Name: COUNTY LINE				Well #: 3130-02H		API/UWI #: 05-123-51180-00				
Field: WATTENBERG		City (SAP): LOCHBUIE		County/Parish: WELD			State: COLORADO			
Legal Description: SW SE-31-1N-65W-340FSL-1760FEL										
Contractor: PRECISION DRLG					Rig/Platform Name/Num: PRECISION 464					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Kyle Bath					
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		17697ft		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	2406	0	2406
Casing		5.5	4.67	23			0	17661	0	7956
Open Hole Section			8.5				2406	17697	2406	7956
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			17661		Top Plug	5.5		HES	
Float Shoe	5.5					Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		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				
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	1250	sack	13.2	1.6		4	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	2.03		4	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				
0.20 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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		350	bbl	8.34				
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
Mix Water: pH ##		Mix Water Chloride: ## ppm			Mix Water Temperature: ## °F °C				
Cement Temperature: ## °F °C		Plug Displaced by: ## lb/gal kg/m ³ XXXX			Disp. Temperature: ## °F °C				
Plug Bumped? Yes/No		Bump Pressure: ##### psi MPa			Floats Held? Yes/No				
Cement Returns: ## bbl m ³		Returns Density: ## lb/gal kg/m ³			Returns Temperature: ## °F °C				
Comment									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Depart Yard Safety Meeting	Depart Yard Safety Meeting	2/1/2022	22:00:00					PRE CONVOY SAFETY MEETING WITH ALL HES EE
2	Crew Leave Yard	Crew Leave Yard	2/1/2022	22:30:00					CREW DEPART YARD FOR LOCATION
3	Arrive At Loc	Arrive At Loc	2/1/2022	23:30:00					ARRIVE ON LOCATION, RECIEVED NUMBERS FROM CO REP, TD 17697, TP 17661, SJ 51, CSG 5.5 20#, PREV CSG 9 5/8 36#, HOLE 8.5, MUD 10.3, TVD 7537, 187 CENTALIZERS, WATER TEST, TEMP 65, CHLORIDES 0, PH 7
4	Call Out	Call Out	2/2/2022	00:01:00					CREW CALLED OUT, REQUESTED ON LOCATION 06:00
5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/2/2022	07:00:00					SAFETY MEETING WITH ALL HES EE TO ASSESS ALL HAZARDS
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	2/2/2022	07:15:00					PRE RIG UP SAFETY MEETING WITH ALL HES EE
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	2/2/2022	12:50:00	0.00	0.00	14.91	0.00	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
8	Start Job	Start Job	2/2/2022	13:35:11	6.42	0.00	38.59	0.00	START RECORDING DATA
9	Test Lines	Test Lines	2/2/2022	13:37:03	7.71	0.00	100.76	0.83	TEST LINES TO 5000 PSI

10	Pump Spacer 1	Pump Spacer 1	2/2/2022	13:39:54	7.60	0.00	36.99	0.00	PUMP 100 BBLS TUNED PRIME SPACER 11.5 PPG, 6 BPM 250 PSI
11	Check Weight	Check Weight	2/2/2022	13:42:21	11.29	3.48	275.79	7.20	VERIFY WEIGHT OM PRESSURIZED MUD SCALES
12	Drop Bottom Plug	Drop Bottom Plug	2/2/2022	13:57:58	11.89	5.17	285.89	96.77	LAUNCH BOTTOM PLUG
13	Pump Lead Cement	Pump Lead Cement	2/2/2022	13:58:01	11.95	5.10	275.22	0.09	MIX AND PUMP 1250 SKS 356 BBLS LEAD CEMENT 13.2 PPG 1.6 FT3/SK, 7.66 GAL/SK, 9 BPM, 550 PSI, CALCULATED TOLC SURFACE
14	Check Weight	Check Weight	2/2/2022	14:01:07	13.28	5.98	339.80	15.81	VERIFY WEIGHT OM PRESSURIZED MUD SCALES
15	Pump Tail Cement	Pump Tail Cement	2/2/2022	14:42:33	13.07	8.20	405.91	0.07	MIX AND PUMP 1180 SKS 426.6 BBLS TAIL CEMENT 13.2 PPG, 2.03 FT3/SK, 9.71 GAL/SK 9 BPM 800 PSI, CALCULATED TOTC 7232
16	Check Weight	Check Weight	2/2/2022	14:49:24	13.30	9.25	651.11	57.28	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
17	Shutdown	Shutdown	2/2/2022	15:33:24	13.42	0.00	241.50	422.48	SHUTDOWN, WASH PUMPS AND LINES TO TANK
18	Drop Top Plug	Drop Top Plug	2/2/2022	15:44:38	7.58	0.00	9.85	439.78	LAUNCH TOP PLUG
19	Pump Displacement	Pump Displacement	2/2/2022	15:44:40	7.58	0.00	9.54	0.00	PUMP 390 BBLS BIOCIDES DISPLACEMENT, FIRST 40 BBLS W/MMCR, 10 BPM, 3150 PSI, RECIEVED 100 BBLS TUNED PRIME SPACER AND 43 BBLS CEMENT TO SURFACE
20	Bump Plug	Bump Plug	2/2/2022	16:43:41	7.76	0.00	3534.25	377.51	BUMP PLUG AT 3000 PSI TOOK TO 3500 PSI
21	Check Floats	Check Floats	2/2/2022	16:45:39	7.68	0.00	2851.92	377.51	FLOATS HELD TOOK 4.5 BBLS BACK
22	End Job	End Job	2/2/2022	16:46:27	2.89	0.00	45.09	0.00	STOP RECORDING DATA
23	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	2/2/2022	17:00:00					PRE RIG DOWN SAFETY MEETING WITH ALL HES EE

24	Depart Location Safety Meeting	Depart Location Safety Meeting	2/2/2022	18:00:00	PRE DEPARTURE SAFETY MEETING WITH ALL HES EE
25	Crew Leave Location	Crew Leave Location	2/2/2022	18:30:00	THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

3.0 Attachments

3.1 Real Time iCem Job Chart

