

# HALLIBURTON

iCem® Service

**VERDAD RESOURCES LLC**

Ft. Lupton District, COLORADO

**KBL 1930-09H**

Production Casing

Job Date: Wednesday, August 04, 2021

Sincerely,

**MIKE LOUGHRAN**

## Legal Notice

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### Disclaimer:

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the KBL 1930-09H 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 22 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**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 380688		<b>Ship To #:</b> 9032723		<b>Quote #:</b>		<b>Sales Order #:</b> 0907305922				
<b>Customer:</b> VERDAD RESOURCES LLC-EBUS						<b>Customer Rep:</b> Jason Hansen				
<b>Well Name:</b> KBL			<b>Well #:</b> 1930-09H			<b>API/UWI #:</b> 05-123-50882-00				
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> KEENESBURG		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> NW SE-19-2N-63W-1806FSL-2051FEL										
<b>Contractor:</b> PRECISION DRLG					<b>Rig/Platform Name/Num:</b> PRECISION 464					
<b>Job BOM:</b> 7523 7523										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA\HX41066					<b>Srv Supervisor:</b> Michael Loughran					
<b>Job</b>										
<b>Job depth MD</b>		15206ft			<b>Job Depth TVD</b>					
<b>Well Data</b>										
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36			0	1818	0	1818
Casing		5.5	4.892	17			0	14623	0	7629
Open Hole Section			8.5				1824	14638	1824	7629
<b>Tools and Accessories</b>										
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	
Float Shoe	5.5			14623		Top Plug	5.5	1	HES	
Float Collar	5.5			14552		Bottom Plug	5.5	1	HES	
						Plug Container	5.5	1	HES	
						Centralizers	5.5			

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 SPACER	100	bbl	11.5	3.71			
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	Cap Cement	ELASTICEM™ SYSTEM	300	sack	13.2	1.6		8	7.65
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	Lead Cement	ELASTICEM™ SYSTEM	880	sack	13.2	1.6		8	7.66
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	Tail Cement	NeoCem™	866	sack	13.2	2.02		8	9.71
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	MMCR Water	40	bbl	8.34				
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
6	Displacement	Biocide Water	297.6	bbl	8.34				
Cement Left In Pipe		Amount	71 ft		Reason			Shoe Joint	
Comment									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Seq. No.	Activity	Date	Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Call Out	8/3/2021	20:00:00					CREW CALLED OUT AT 2000 HRS. REQUESTED ON LOCATION 0200 HRS. 8/4/2021
2	Arrive At Loc	8/4/2021	01:40:00					MEET WITH CO. MAN TO DISCUSS JOB. 17# P-110 14623', TD 14638', TVD 7629', F/C 14552', 9.625" 36# 1824', HOLE 8.5", MUD 9.4#, MAX PRESSURE 3400 PSI, WATER 67 DEGREES, PH7, CHLORIDES LESS 200 PPM.
3	Pre-Rig Up Safety Meeting	8/4/2021	05:00:00					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER.
4	Rig-Up Equipment	8/4/2021	05:10:00					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
5	Pre-Job Safety Meeting	8/4/2021	07:00:00	8.32	0.00	34.00	43.90	SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS.
6	Start Job	8/4/2021	07:26:02	8.31	0.00	35.00	0.00	BEGIN RECORDING DATA-RIG CIRCULATES 9 BPM/820 PSI
7	Prime Pumps	8/4/2021	07:49:16	8.38	0.00	33.00	0.00	FILL LINES
8	Test Lines	8/4/2021	07:55:19	8.37	0.00	4951.00	3.40	TEST LINES TO 5000 PSI
9	Pump Spacer 1	8/4/2021	07:59:45	8.25	0.00	37.00	3.40	100 BBL TUNED PRIME SPACER_11.5 PPG_3.71 YIELD_23.58 GAL/SACK_ADD D-AIR ON FLY
10	Shutdown	8/4/2021	08:16:21	12.89	0.00	86.00	94.10	SHUTDOWN TO DROP PLUG
11	Drop Bottom Plug	8/4/2021	08:17:53	12.57	0.00	36.00	0.00	BOTTOM PLUG VERIFIED BY DRILLER
12	Pump Cement	8/4/2021	08:18:33	12.51	1.70	40.00	0.00	300 SACKS ELASTICEM CAP CEMENT W/O CBL_85.49 BBL_13.2 PPG_1.6 YIELD_7.65 GAL/SACK_ADD D-AIR ON FLY
13	Pump Lead Cement	8/4/2021	08:33:43	13.08	5.70	237.00	0.00	880 SACKS ELASTICEM TM SYSTEM LEAD CEMENT_250.76 BBLS_13.2 PPG_1.6 YIELD_7.66 GAL/SACK_ADD D-AIR ON FLY
14	Pump Tail Cement	8/4/2021	09:05:35	13.26	8.50	524.00	0.10	866 SACKS NEOCEM TM TAIL CEMENT_311.55 BBLS_13.2 PPG_2.02 YIELD_9.71 GAL/SACK_ MIX D-AIR ON FLY
15	Shutdown	8/4/2021	09:43:34	13.62	0.00	49.00	0.00	SHUTDOWN
16	Clean Lines	8/4/2021	09:46:29	13.27	0.00	45.00	0.00	CLEAN PUMPS AND LINES
17	Drop Top Plug	8/4/2021	09:53:15	8.24	0.00	50.00	0.00	TOP PLUG VERIFIED BY JASON

18	Pump Displacement	8/4/2021	09:55:19	8.20	0.00	40.00	0.00	337.6 BBLS FRESH WATER DISPLACEMENT. 1ST 40 BBLS HAVE 20 GALLONS MICRO MATRIX CEMENT RETARDER. 3 LBS BE-3_5 GALLONS MC MX 820-6 THROUGHOUT DISPLACEMENT.
19	Bump Plug	8/4/2021	10:41:04	8.25	0.00	3543.00	0.00	FCP 2850 PSI @ 4 BPM _ BUMP PRESSURE 3500 PSI _ SEE CEMENT AT 315 INTO DISPLACEMENT _ APPROX 22 BBLS CEMENT TO SURFACE. PRE-JOB CALCULATIONS_ TOTC=7027'_ TOLC=1021'_ TOC=0'
20	Other	8/4/2021	10:46:41	8.24	0.00	3652.00	0.00	CHECK FLOATS_FLOATS HOLD_4.5 BBLS BACK TO PUMP TRUCK
21	End Job	8/4/2021	10:48:53	8.24	0.00	34.00	0.00	STOP RECORDING DATA
22	Pre-Rig Down Safety Meeting	8/4/2021	11:15:00					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
23	Rig-Down Equipment	8/4/2021	11:20:00					RIG DOWN BULK AND MIXING EQUIPMENT
24	Rig-Down Completed	8/4/2021	12:00:00					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
25	Crew Leave Location	8/4/2021	12:30:00					THANK YOU FOR USING HALLIBURTON – MIKE LOUGHRAN AND CREW.



3.0 Attachments

3.1 Job Chart

