

# HALLIBURTON

iCem<sup>®</sup> Service

**VERDAD OIL & GAS**

**Jackson 33-6H**

Sincerely,  
**Meghan Jacobs**

## Legal Notice

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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 **Jackson 33-6H** 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 22bbls of cement 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 [Ft. Lupton]**

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## Cementing Job Summary

*The Road to Excellence Starts with Safety*

Sold To #: 380688		Ship To #: 380688		Quote #: 0022399938		Sales Order #: 0904745396					
Customer: VERDAD RESOURCES LLC				Customer Rep: Jason							
Well Name: Jackson			Well #: 33-6H			API/UWI #:					
Field:		City (SAP): FORT LUPTON		County/Parish: WELD			State: COLORADO				
<b>Legal Description:</b>											
Contractor: XTREME DRLG				Rig/Platform Name/Num: XTREME 24							
Job BOM: 7523 7523											
Well Type: OIL & GAS WELL											
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Bryan Kraft						
<b>Job</b>											
<b>Formation Name</b>											
Formation Depth (MD)		Top			Bottom						
Form Type											
BHST											
Job depth MD		12689ft			Job Depth TVD		7050ft				
Water Depth											
Wk Ht Above Floor 5ft											
Perforation Depth (MD)		From			To						
<b>Well Data</b>											
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	LTC	J-55	0	1721	0	1721	
Casing		5.5	4.778	20	TXP-BTC	P-110	0	12689	0	7050	
Open Hole Section			8.5				1721	12689	1721	7050	
<b>Tools and Accessories</b>											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe						Top Plug	5.5	1	WF		
Float Shoe	5.5	1	WF	12689		Bottom Plug	5.5	1	WF		
Wet Shoe Sub	5.5	1	WF	12543		SSR plug set					
Insert Float						Plug Container	5.5	1	HES		
Stage Tool						Centralizers					
<b>Fluid Data</b>											
Stage/Plug #: 1											
Fluid #	Stage Type	Fluid Name			Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Spacer	TUNED SPACER III			40	bbl	11.5	3.79	23.3	4	1381
147.42 lbm/bbl		BARITE, BULK (100003681)									
36.09 gal/bbl		FRESH WATER									

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Lead Cement	ELASTICEM (TM) SYSTEM	1030	sack	13.2	1.57	7.55	7.5	7777
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Tail Cement	NEOCEM TM	744	sack	13.2	2.04	9.75	7.5	7254
9.71 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	FRESH WATER	278	bbl	8.33			7	2316
0.10 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
Cement Left In Pipe	Amount	0 ft		Reason				Wet Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:		<300 ppm		Mix Water Temperature:		60 °F	
Cement Temperature:	N/A	Plug Displaced by:		8.33lb/gal Fresh Water		Disp. Temperature:		60 °F	
Plug Bumped?	Yes	Bump Pressure:		2370 psi		Floats Held?		Yes	
Cement Returns:	22 bbls	Returns Density:		N/A		Returns Temperature:		N/A	
Comment: The plug bumped @ calculated displacement @ 2370 PSI, shutdown for 5 minutes @ 3000 PSI. The sleeve opened @ 4359 PSI and pumped a 5 BBL wet shoe. The floats held and received 2 BBLS back to the truck. Spacer returned to surface @ 216 BBLS into displacement, cement returned to surface @ 256 BBLS into displacement. Total of 40 BBLS and 22 BBLS cement returned to surface.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Recirc Density (ppg)	Comments
Event	1	Call Out	Call Out	4/3/2018	06:30:00	USER				CREW CALLED OUT AT 6:30 4/3/2018, REQUESTED ON LOCATION 10:300 4/3/2018. CREW PICKED UP CEMENT, CHEMICALS (30 GAL MUSOL A, 30 GAL DUAL SPACER B, 10 GAL D-AIR, 5 GAL MMCR), 100 LBS SUGAR, PLUG CONTAINER AND MANIFOLD FROM FORT LUPTON, CO. BULK 660: 11138996/10866497, BULK 660: 12350112, PUMP ELITE 11360879/11512092.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/3/2018	08:45:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Yard	Crew Leave Yard	4/3/2018	09:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Arrive At Loc	4/3/2018	09:45:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# J-55 @ 1721', 5.5" CASING: 20# P-110 @ 12689', 145.75' SHOE JOINT, 8.5" OPEN HOLE, TVD @ 7050', 9.7 PPG WELL FLUID, FRESH WATER DISPLACEMENT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	4/3/2018	10:00:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	4/3/2018	10:15:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	4/3/2018	11:25:00	USER	1.70	3.00	-0.01	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	4/3/2018	11:47:19	COM6	1.70	-2.00	-0.01	BEGIN REOCRDRING JOB DATA.
Event	9	Test Lines	Test Lines	4/3/2018	11:48:43	COM6	0.80	204.00	-0.01	PRESSURE TESTED IRON TO 6000 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 800 PSI, 5TH GEAR STALL OUT @ 2100 PSI.
Event	10	Pump Spacer 1	Pump Spacer @ 11.5 ppg	4/3/2018	12:00:12	COM6	2.60	57.00	11.55	PUMP 40 BBLS OF TUNED SPACER @ 11.5 LB/GAL,

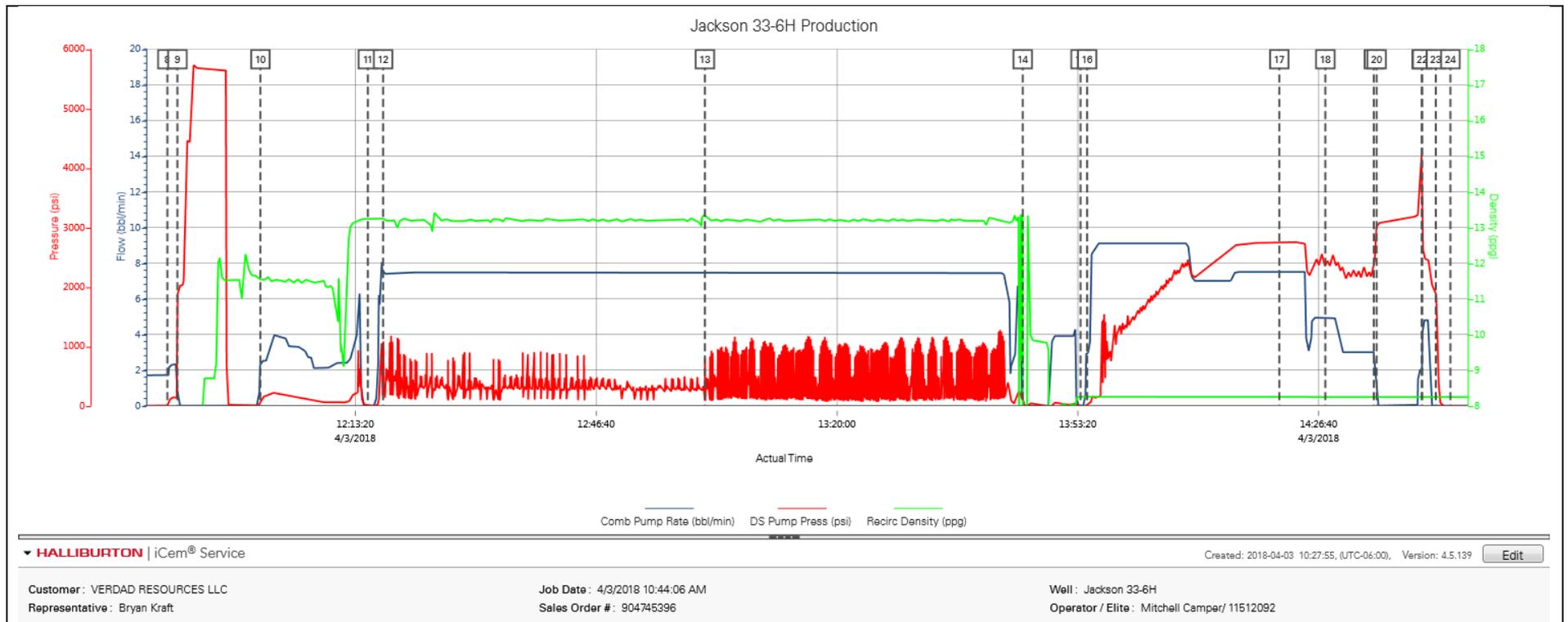
ADDED 30 GAL MUSOL A, 30 GAL DUAL SPACER B, 10 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.

Event	11	Drop Bottom Plug	Drop Bottom Plug	4/3/2018	12:15:04	USER	0.00	-2.00	13.25	PLUG LEFT CONTAINER, VERIFIED BY DRILLER.
Event	12	Pump Lead Cement	Pump Lead Cement @ 13.2 ppg	4/3/2018	12:17:11	COM6	7.40	288.00	13.19	PUMP 1030 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.55 GAL/SK, 288 BBLS, CALCULATED TOL @ SURFACE, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	13	Pump Tail Cement	Pump Tail Cement @ 13.2 ppg	4/3/2018	13:01:43	COM6	7.50	124.00	13.30	PUMP 744 SKS OF NEOCEM @ 13.2 LB/GAL, 2.04 YIELD, 9.75 GAL/SK, 271 BBLS, CALCULATED TOT @ 6126', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	4/3/2018	13:45:42	COM6	0.00	51.00	13.37	SHUTDOWN TO WASH PUMPS/LINES AND DROP TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	4/3/2018	13:53:42	COM6	0.00	-23.00	8.25	PLUG LEFT CONTAINER, VERIFIED BY CO. MAN.
Event	16	Pump Displacement	Pump Fresh Water Displacement	4/3/2018	13:54:37	COM6	2.90	-8.00	8.25	BEGIN CALCULATED DISPLACEMENT OF 278 BBLS WITH FRESH WATER. MMCR AND BIOCIDES ADDED TO 1ST 40 BBLS. BIOCIDES ADDED THROUGH REST OF DISPLACEMENT.
Event	17	Spacer Returns to Surface	Spacer Returns to Surface	4/3/2018	14:21:13	USER	7.50	2736.00	8.24	SPACER RETURNED TO SURFACE @ 216 BBLS INTO DISPLACEMENT. TOTAL AMOUNT OF 40 BBLS SPACER TO SURFACE.
Event	18	Cement Returns to Surface	Cement Returns to Surface	4/3/2018	14:27:35	USER	4.90	2321.00	8.24	CEMENT RETURNED TO SURFACE @ 256 BBLS INTO DISPLACEMENT. TOTAL AMOUNT OF 22 BBLS SPACER TO SURFACE.
Event	19	Bump Plug	Bump Plug	4/3/2018	14:34:17	USER	3.00	2373.00	8.24	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE 2370 PSI.
Event	20	Shutdown	Shutdown	4/3/2018	14:34:41	USER	0.00	3013.00	8.24	SHUTDOWN FOR 5 MINUTES @ 3000 PSI.
Event	21	Other	Open Sleeve	4/3/2018	14:40:55	USER	2.00	4238.00	8.24	PRESSURE UP TO OPEN SLEEVE. SLEEVE OPENED @ 4359 PSI.
Event	22	Pump Displacement	Pump Wet Shoe	4/3/2018	14:41:00	USER	2.40	3037.00	8.24	PUMP 5 BBLS OF FRESH WATER FOR A WET SHOE.
Event	23	Check Floats	Check Floats	4/3/2018	14:42:52	USER	0.00	1952.00	8.24	RELEASED PRESSURE, FLOATS HELD, 2 BBLS BACK.

Event	24	End Job	End Job	4/3/2018	14:44:54	COM6	0.00	-7.00	8.23	STOP RECORDING JOB DATA.
Event	25	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	4/3/2018	14:50:00	USER	0.00	0.00	8.25	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	26	Rig-Down Completed	Rig-Down Completed	4/3/2018	15:30:00	USER				ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	27	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	4/3/2018	15:45:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	28	Crew Leave Location	Crew Leave Location	4/3/2018	16:00:00	USER				THANK YOU FOR USING HALLIBURTON - BRYAN KRAFT AND CREW.

3.0 Attachments

3.1 Jackson 33-6H – Job Chart with Events



### 3.2 Jackson 33-6H – Job Chart without Events

