

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America

Date: Monday, March 06, 2017

### **Kiteley 4**

Production

Job Date: Monday, February 27, 2017

Sincerely,

**Justin Lansdale**

## 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 **Kiteley 4** cement **Surface** 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.

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> 369404		<b>Ship To #:</b> 3770363		<b>Quote #:</b>		<b>Sales Order #:</b> 0903867591				
<b>Customer:</b> EXTRACTION OIL & GAS				<b>Customer Rep:</b> Jose Torres						
<b>Well Name:</b> KITELEY			<b>Well #:</b> 4		<b>API/UWI #:</b> 05-123-43926-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> LONGMONT		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> NW SW-21-3N-68W-1468FSL-559FWL										
<b>Contractor:</b> CYCLONE				<b>Rig/Platform Name/Num:</b> CYCLONE 37						
<b>Job BOM:</b> 7523										
<b>Well Type:</b> HORIZONTAL OIL										
<b>Sales Person:</b> HALAMERICA\HX38199				<b>Srvc Supervisor:</b> Nicholas Roles						
<b>Job</b>										
<b>Formation Name</b>										
<b>Formation Depth (MD)</b>		<b>Top</b>		<b>Bottom</b>						
<b>Form Type</b>				<b>BHST</b>						
<b>Job depth MD</b>		11705ft		<b>Job Depth TVD</b>						
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>						
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</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	1575	0	1575
Casing		5.5	4.778	20			0	11705	0	7200
Open Hole Section			8.5				1575	11715	1575	7200
<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>	
<b>Guide Shoe</b>	5.5					<b>Top Plug</b>	5.5		HES	
<b>Float Shoe</b>	5.5			11705		<b>Bottom Plug</b>	5.5		HES	
<b>Float Collar</b>	5.5					<b>SSR plug set</b>	5.5		HES	
<b>Insert Float</b>	5.5					<b>Plug Container</b>	5.5	1	HES	
<b>Stage Tool</b>	5.5					<b>Centralizers</b>	5.5		HES	
<b>Fluid Data</b>										
<b>Stage/Plug #: 1</b>										
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>	<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		6		
0.30 gal/bbl		<b>MUSOL A, 330 GAL TOTE - (790828)</b>								
149.34 lbm/bbl		<b>BARITE, BULK (100003681)</b>								

35.40 gal/bbl		FRESH WATER							
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
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 W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.48
7.48 Gal		FRESH WATER							
0.90 %		HR-5, 50 LB SK (100005050)							
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	ElastiCem Tail	ELASTICEM (TM) SYSTEM	1750	sack	13.2	1.57		8	7.49
7.49 Gal		FRESH WATER							
0.80 %		HR-5, 50 LB SK (100005050)							
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	Displacement	258	bbl	8.33			10	
Cement Left In Pipe		Amount	0 ft		Reason			Wet shoe	
Comment Got 28bbbls cement to surface.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	2/27/2017	18:00:00	USER	Crew call out for o/l at 2230
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/27/2017	21:15:00	USER	All crew aware of hazards and directions. All fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	2/27/2017	21:30:00	USER	Started journey management.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	2/27/2017	22:15:00	USER	Met with company man to discuss job details and procedure. Performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/27/2017	22:30:00	USER	All hse present. Discussed bulk and iron placement and all red zone areas. Caution taped high pressure zones.
Event	6	Other	Other	2/27/2017	23:15:00	USER	Water Test- PH-6 Chlo-0 Temp-60 Cement temp-70
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	2/27/2017	01:00:00	USER	Discussed job associated hazards, contingencies and job procedure with all job associated personnel.
Event	8	Start Job	Start Job	2/27/2017	01:22:20	COM1	TD-11715' 8.5", TP-11705' 5.5" 20#, SURF-1575' 9.625" 36#, TVD-7200', MUD-9.6#
Event	9	Test Lines	Test Lines	2/27/2017	01:27:13	COM1	Pumped 5bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to bring pressure to 5000psi, pressure held no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	2/27/2017	01:40:04	COM1	Pumped 50bbls 11.5# 3.74y 23.7g/s Tuned Spacer III with 15g Musol A, 15g Dual Spacer B and 10g D-Air at 5bpm 145psi.
Event	11	Check Weight	Check Weight	2/27/2017	01:43:53	COM1	Weight verified with pressurized mud scales.
Event	12	Pump Lead Cement	Pump Lead Cement	2/27/2017	01:48:52	COM1	Pumped 150sks or 41.9bbls of 13.2# 1.57y

							7.48g/s Elasticem w/o CBL at 6bpm 340psi.
Event	13	Check Weight	Check Weight	2/27/2017	01:50:50	COM1	Weight verified with pressurized mud scales.
Event	14	Pump Tail Cement	Pump Tail Cement	2/27/2017	01:55:40	COM1	Pumped 1750sks or 489bbls of 13.2# 1.57y 7.48g/s Elasticem W/ CBL at 8bpm 465psi.
Event	15	Check Weight	Check Weight	2/27/2017	01:57:33	COM1	Weight verified with pressurized mud scales.
Event	16	Check Weight	Check Weight	2/27/2017	02:23:44	COM1	Weight verified with pressurized mud scales.
Event	17	Check Weight	Check Weight	2/27/2017	02:54:28	COM1	Weight verified with pressurized mud scales.
Event	18	Other	Other	2/27/2017	03:08:38	COM1	Shutdown, rig blew down lines to pits, followed with 5bbls fresh water to clean pumps and lines.
Event	19	Drop Top Plug	Drop Top Plug	2/27/2017	03:12:05	COM1	Dropped by Tool Hand, witnessed by company man and HES supervisor.
Event	20	Pump Displacement	Pump Displacement	2/27/2017	03:12:10	COM1	Pumped 258bbls fresh water at 10bpm 2637psi.
Event	21	Bump Plug	Bump Plug	2/27/2017	03:44:44	COM1	Slowed down to 5bpm at 240bbls gone, final circulating pressure-2460psi. Bump pressure-2936psi.
Event	22	Other	Other	2/27/2017	03:45:25	COM1	Burst Disc at 3807psi, followed by 5bbls fresh water at 5bpm 2435psi.
Event	23	Check Floats	Check Floats	2/27/2017	03:47:31	USER	Released pressure and got 2bbls back.
Event	24	End Job	End Job	2/27/2017	03:48:56	COM1	Got 28bbls cement to surface.
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	2/27/2017	03:50:00	USER	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/27/2017	05:45:00	USER	All HSE present and fit to drive. Aware of directions and hazards.



Event	27	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/27/2017	06:00:00	USER	Pre journey managment prior to departure.
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2.2 Custom Graph

