

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America

Date: Thursday, December 29, 2016

### **Hester Farms B-36HC**

Production

Job Date: Thursday, December 22, 2016

Sincerely,

**Justin Lansdale**

## 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 **Hester Farms B-36HC** 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.

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> 3684137		<b>Quote #:</b>		<b>Sales Order #:</b> 0903732411				
<b>Customer:</b> EXTRACTION OIL & GAS				<b>Customer Rep:</b> Jose Torres						
<b>Well Name:</b> HESTER FARMS			<b>Well #:</b> B-36HC		<b>API/UWI #:</b> 05-123-41998-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> EATON		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO				
<b>Legal Description:</b> 31-7N-66W-1604FNL-202FWL										
<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>Srv Supervisor:</b> Vaughn Oteri						
<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>		12175 ft		<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	1552	0	1552
Casing		5.5	4.778	20			0	12175	0	7300
Open Hole Section			8.5				1552	12200	1552	7300
<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	1	KLX	
<b>Float Shoe</b>	5.5			12175		<b>Bottom Plug</b>	5.5			
<b>Float Collar</b>	5.5			12171		<b>SSR plug set</b>	5.5			
<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			
<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		4		

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		8	7.48
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	2100	sack	13.2	1.57		8	7.49
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	268	bbl	8.33			8	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Comment 68bbl of cement back 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	12/22/2016	17:00:00	USER	Call out from Arc hub
Event	2	Arrive At Loc	Arrive At Loc	12/22/2016	21:00:00	USER	Requested on location at 2300 Arrived on location at 2100 met with company rep to discuss job process and concerns
Event	3	Other	Other	12/22/2016	21:10:10	USER	TD-12200 TP12175 FC-12171 OH-8.75 Mud 9.0ppg Water temp tank 1=47f tank 2=142f tank 3=156f Casing-5.5 20#
Event	4	Start Job	Start Job	12/22/2016	03:57:24	COM4	Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	12/22/2016	04:08:19	COM4	Pressure tested pumps and lines with fresh water 5120psi found no leaks and pressure held good
Event	6	Pump Spacer 1	Pump Spacer 1	12/22/2016	04:12:25	COM4	Mixed 50bbl of 11.5ppg Tuned spacer III at 5.0bpm 282psi
Event	7	Pump Cement	Pump Cement	12/22/2016	04:24:54	COM4	Mixed 2250sks or 629bbl of 13.2ppg Y-1.57 g/sk 7.48 Elasticem at 8.0bpm 462psi
Event	8	Check Weight	Check weight	12/22/2016	04:26:37	COM4	Confirmed weight on scales of 13.2ppg
Event	9	Other	Other	12/22/2016	05:35:07	COM4	Slowed rate to to water tank empty
Event	10	Shutdown	Shutdown	12/22/2016	05:53:58	COM4	
Event	11	Drop Top Plug	Drop Top Plug	12/22/2016	05:54:02	COM4	KLX tool hand released plug witnessed by company rep and HES supervisor
Event	12	Clean Lines	Clean Lines	12/22/2016	05:54:07	COM4	Washed pumps and lines with fresh water

Event	13	Pump Displacement	Pump Displacement	12/22/2016	06:02:46	COM4	Pumped 268bbl of fresh water to displace cement
Event	14	Pressure Up Well	Pressure Up Well	12/22/2016	06:33:54	COM4	Pressure up well to blow disc in plug fro 5bbl wet shoe
Event	15	Other	Other	12/22/2016	06:36:29	COM4	Released pressure back to pump truck to check floats, Floats held good 2.0bbl back
Event	16	End Job	End Job	12/22/2016	06:38:17	COM4	68bbl of cement back to surface



2.2 Custom Graph



