

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America

### **Hester Farms A-36HN**

Production

Job Date: Sunday, December 25, 2016

Sincerely,

**Derek Trier**

## Legal Notice

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## Table of Contents

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1.0	Cementing Job Summary .....	4
1.1	Executive Summary .....	4
2.0	Real-Time Job Summary .....	7
2.1	Job Event Log .....	7
3.0	Attachments.....	9
3.1	Cyclone 37 Hester Farms A-36HN-Custom Results (1)-No events.png.....	9

## 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 A-36HN 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, 36bbl 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]**



## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3684136	Quote #:	Sales Order #: 0903741137							
Customer: EXTRACTION OIL & GAS		Customer Rep: Todd Stephens								
Well Name: HESTER FARMS	Well #: A-36HN	API/UWI #: 05-123-41993-00								
Field: WATTENBERG	City (SAP): EATON	County/Parish: WELD	State: COLORADO							
Legal Description: 31-7N-66W-1589FNL-202FWL										
Contractor: CYCLONE		Rig/Platform Name/Num: CYCLONE 37								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srcv Supervisor: Nicholas Roles								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type	BHST									
Job depth MD	12036ft	Job Depth TVD								
Water Depth	Wk Ht Above Floor									
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			0	1553	0	1553
Casing		5.5	4.778	20			0	12036	0	7260
Open Hole Section			8.5				1550	12045	1553	7260
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5				Top Plug	5.5		HES		
Float Shoe	5.5			12036	Bottom Plug	5.5		HES		
Float Collar	5.5				SSR plug set	5.5		HES		
Insert Float	5.5				Plug Container	5.5	1	HES		
Stage Tool	5.5				Centralizers	5.5		HES		
<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	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		5		
0.30 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
149.34 lbm/bbl		BARITE, BULK (100003681)								
35.40 gal/bbl		FRESH WATER								
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

last updated on 12/25/2016 8:19:23 AM

Page 1 of 2

**HALLIBURTON**

**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	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		7	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 ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ElastiCem Tail	ELASTICEM (TM) SYSTEM	1850	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 ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	265	bbbl	8.33			10	
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe	
Comment Got 65bbbls cement back, plus 5bbbl wet shoe, total 70bbbls.									

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate <i>(bbl/min)</i>	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	12/25/2016	18:00:00	USER					Crew call out for o/l at 2300
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/25/2016	20:00:00	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	12/25/2016	20:30:00	USER					all crew aware of hazards and directions. all fit to drive.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/25/2016	21:30:00	USER					Met with company man to discuss job details and procedure. Performed hazard hunt and site assessment. Rig had 2000' left to run.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/25/2016	22:00:00	USER					All hse present. Discussed bulk and iron placement and all red zone areas. Caution taped high pressure zones.
Event	6	Other	Other	12/25/2016	22:15:00	USER					Water Test- PH-6 Chlo-0 Temp-50
Event	7	Start Job	Start Job	12/25/2016	04:39:06	COM2					TD-12045', TP-12036' 5.5" 20#, TOE SLEEVE-11993', TVD-7260', SURF-1553' 9.625" 36#, OH-8.5", MUD-8.9#.
Event	8	Test Lines	Test Lines	12/25/2016	04:51:15	COM2	0.00	8.58	4800.00	3.60	Pumped 3bbls fresh water to fill lines, shut in valves and performed 500psi k/o function test, proceeded to bring up pressure to 4800psi. Pressure held and no leaks.
Event	9	Pump Spacer 1	Pump Spacer 1	12/25/2016	05:01:54	COM2	0.00	8.47	2.00	3.60	Pumped 50bbls of 11.5# 3.74y 23.7g/s Tuned Spacer III, with 15g Musol A, 15g Dual Spacer B and 10g D-Air, at 5bpm 180psi.
Event	10	Pump Lead Cement	Pump Lead Cement	12/25/2016	05:11:49	COM2	4.80	12.32	144.00	46.10	Pumped 150sks or 41.9bbls of 13.2# 1.57y

				6	7.48g/s Elasticem w/o CBL at 7bpm 370psi.						
Event	11	Check Weight	Check Weight	12/25/2016	05:13:06	COM2	4.00	13.32	146.00	5.20	Weight verified by pressurized mud scales.
Event	12	Pump Tail Cement	Pump Tail Cement	12/25/2016	05:20:14	COM2	3.90	12.97	122.00	40.70	Pumped 1850sks or 517.2bbbls of 13.2# 1.57y 7.49g/s Elasticem w/CBL at 8bpm 535psi.
Event	13	Check Weight	Check Weight	12/25/2016	05:28:28	COM2	5.80	13.25	273.00	35.10	Weight verified by pressurized mud scales.
Event	14	Check Weight	Check Weight	12/25/2016	05:41:16	USER	8.00	13.22	413.00	135.00	Weight verified by pressurized mud scales.
Event	15	Check Weight	Check Weight	12/25/2016	06:00:16	USER					Weight verified by pressurized mud scales.
Event	16	Check Weight	Check Weight	12/25/2016	06:23:03	COM2	8.10	13.36	416.00	445.40	Weight verified by pressurized mud scales.
Event	17	Clean Lines	Clean Lines	12/25/2016	06:39:15	COM2					Shutdown pumps after cement and blew down lines with rig air and washed pumps with 5bbbls fresh water.
Event	18	Drop Top Plug	Drop Top Plug	12/25/2016	06:46:48	COM2					Dropped by klx tool hand, witnessed by HSE supervisor and company man.
Event	19	Pump Displacement	Pump Displacement	12/25/2016	06:46:53	COM2					Pumped 265bbbls fresh water at 10bpm 2246psi.
Event	20	Bump Plug	Bump Plug	12/25/2016	07:18:05	COM2					Slowed down 15bbbls early to 5bpm at psi, bump pressure was 2920psi. Held for 1min. Pressure was holding.
Event	21	Pressure Up Well	Pressure Up Well	12/25/2016	07:20:27	USER	1.90	8.24	3677.00	264.30	Once bump pressure looked good, kicked in pumps at 2bpm to 3922psi to burst disc. Followed by 5bbbls fresh water wet shoe, at 5bpm 2320psi.
Event	22	Check Floats	Check Floats	12/25/2016	07:22:44	USER	0.00	8.18	1843.00	269.80	Released pressure and got 2bbbls back to truck.
Event	23	End Job	End Job	12/25/2016	07:29:19	COM2					Got 65bbbls cement back, plus 5bbbl wet shoe. Total of 70bbbls back.

3.0 Attachments

3.1 Cyclone 37 Hester Farms A-36HN-Custom Results (1)-No events.png

