

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Monday, February 13, 2017

### **Mickey #8 Production**

Job Date: Saturday, January 28, 2017

Sincerely,

**Julia Nichols**

## 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.....	8
3.1	Custom Results – Job Chart with Events .....	8
3.2	Custom Results – Job Chart without Events.....	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 **Mickey #8** 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 50 barrels 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 [Ft. Lupton]**

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*Cementing Job Summary*

*The Road to Excellence Starts with Safety*

Sold To #: 389404		Ship To #: 3768597		Quote #:		Sales Order #: 0903800264				
Customer: EXTRACTION OIL & GAS				Customer Rep: Kalyn Holgate						
Well Name: MICKEY		Well #: 8		API/UWI #: 05-123-43856-00						
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: SW NE-5-6N-67W-2421FNL-1873FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199					Srvc Supervisor: Vaughn Oteri					
<b>Job</b>										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type					BHST					
Job depth MD		17410ft			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	1565		1565
Casing		5.5	4.778	20			0	17390	0	7080
Open Hole Section			7.875				1565	17410	1565	7080
<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	1	KLX	
Float Shoe	5.5			17390		Bottom Plug	5.5			
Float Collar	5.5			17385		SSR plug set	5.5			
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5			
<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		6		
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	ElastiCemW/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		5	7.48	

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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/mi n	Total Mix Fluid Gal
3	ElastiCem W/ Super CBL	ELASTICEM (TM) SYSTEM	2050	sack	13.2	1.57		5	7.49
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement	Displacement	0	bbl	8.33				
Cement Left In Pipe		Amount	Reason		Shoe Joint				
		2 ft							
Comment 50bbl of cement back to surface									

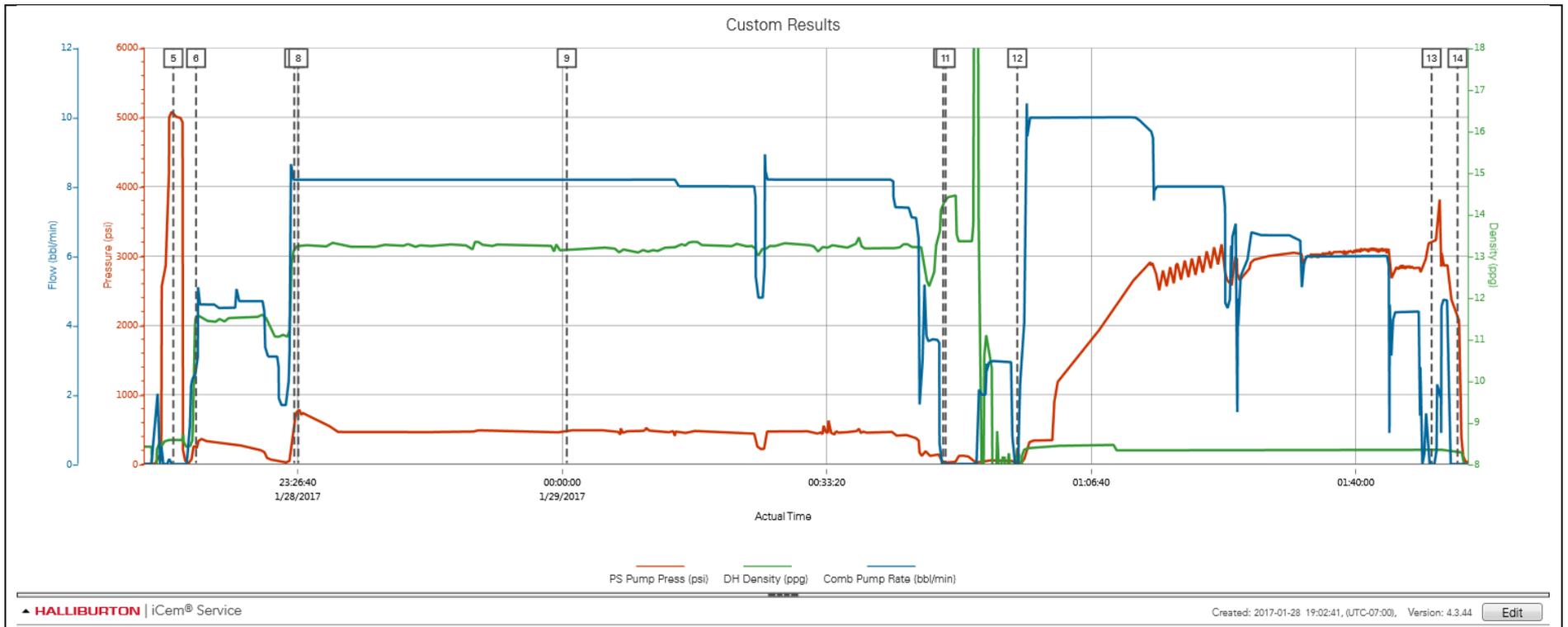
## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	1/28/2017	08:00:00	USER				Call out from ARC hub
Event	2	Arrive At Loc	Arrive At Loc	1/29/2017	17:00:00	USER				Arrived on location met with company rep to discuss job process and concerns
Event	3	Other	Other	1/29/2017	17:01:01	USER				TD-17410 TP-17390 FC-17385 OH-8.5 Casing 5.5 20# Mud9.0ppg Water temp 70 deg
Event	4	Start Job	Start Job	1/29/2017	22:12:15	COM4				Held pre job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	1/29/2017	23:11:00	COM4	5035.00	8.59	0.00	Pressure tested pumps and lines with fresh water 4980psi found no leaks and pressure held good
Event	6	Pump Spacer 1	Pump Spacer 1	1/29/2017	23:13:50	COM4	227.00	11.55	2.60	Mixed 50bbl of 11.5ppg Tuned spacelll at 4.5bpm 300psi
Event	7	Pump Cement	Pump Cement	1/29/2017	23:26:14	COM4	536.00	13.16	8.20	Mixed 2200sks or 615bbl of 13.2ppg Y-1.57 G/sk7.48 Elasticem at 8.0bpm 480psi
Event	8	Check Weight	Check weight	1/29/2017	23:26:45	COM4	782.00	13.25	8.20	Confirmed weight on scales of 13.2ppg
Event	9	Check Weight	Check weight	1/29/2017	00:00:34	COM4	469.00	13.12	8.20	Confirmed weight on scales of 13.2ppg
Event	10	Shutdown	Shutdown	1/29/2017	00:48:00	COM4	29.00	14.26	0.00	
Event	11	Drop Top Plug	Drop Top Plug	1/29/2017	00:48:18	COM4	24.00	14.35	0.00	KLX tool hand released plug witnessed by company rep and HES supervisor
Event	12	Pump Displacement	Pump Displacement	1/29/2017	00:57:20	COM4	12.00	8.41	0.00	Pumped 380bbl of fresh water to displace cement
Event	13	Bump Plug	Bump Plug	1/29/2017	01:49:33	COM4	3217.00	8.33	0.00	Bumped plug 500psi over final pump pressure, presure up on plug to blow disc and pumped 5bbl for wet shoe
Event	14	Other	Other	1/29/2017	01:52:49	COM4	2171.00	8.30	0.00	Released pressure back to pump truck to check floats , floats held good 3.0bbl back
Event	15	End Job	End Job	1/29/2017	02:09:26	COM4				50bbl of cement back to surface

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

