

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Friday, October 14, 2016

### **Winder South #8 Production**

Job Date: Saturday, October 08, 2016

Sincerely,

**Julia Nichols**

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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 **Winder South #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 30 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 #: 3749911	Quote #:	Sales Order #: 0903575179							
Customer: EXTRACTION OIL & GAS		Customer Rep:								
Well Name: WINDER SOUTH	Well #: 8	API/UWI #: 05-123-43405-00								
Field: WATTENBERG	City (SAP): WINDSOR	County/Parish: WELD	State: COLORADO							
Legal Description: SE NE-9-8N-67W-2306FNL-388FEL										
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	17248ft	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		0
Casing		5.5	4.778	20			0	17244	0	7285
Open Hole Section			7.875				1565	17248	0	7285
<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			17244	Bottom Plug	5.5				
Float Collar	5.5			17190	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		5		
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	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		8	7.48	

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### *Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	ElastiCem W/ Super CBL	ELASTICEM (TM) SYSTEM	2025	sack	13.2	1.57		5	7.49
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement	Displacement	379	bbl	8.33			8	
Cement Left In Pipe		Amount	5 ft		Reason			Shoe Joint	
Comment 30bbl of cement back to surface									

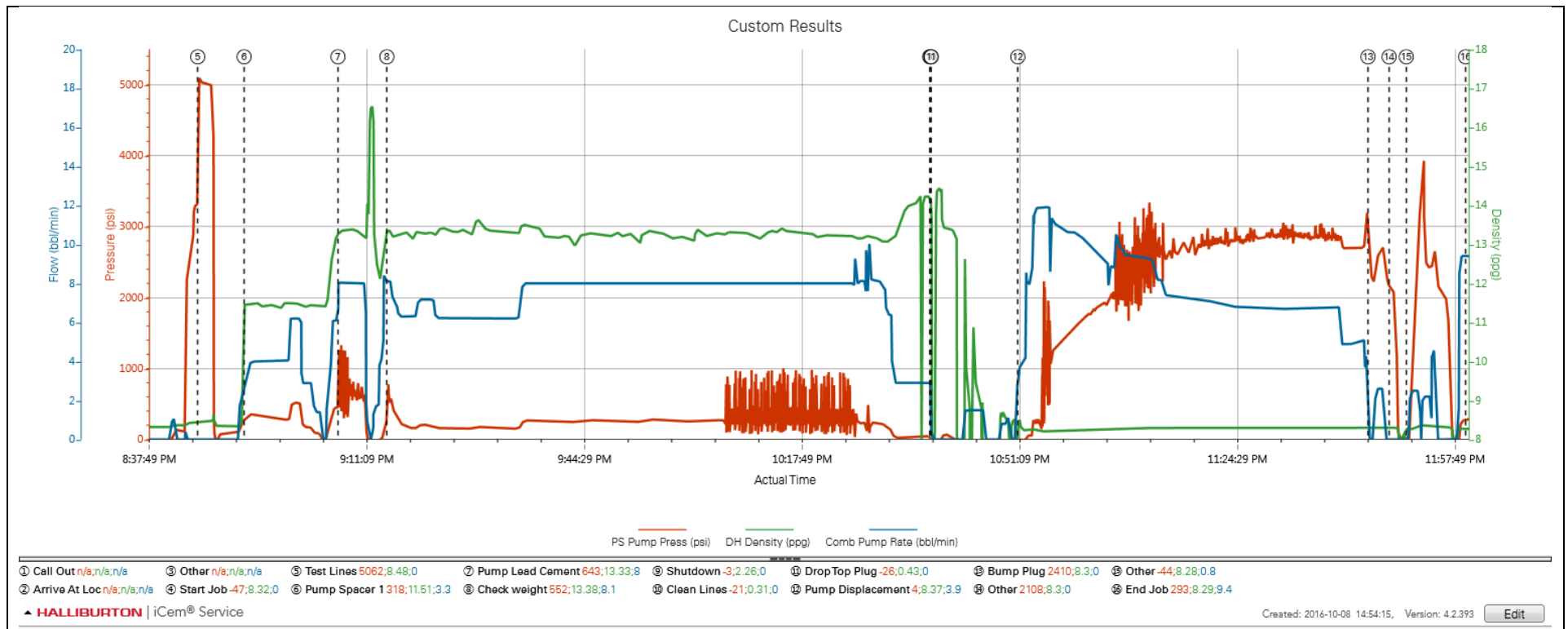
## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	10/8/2016	09:00:00	USER				Call out from ARC hub
Event	2	Arrive At Location	Arrive At Location	10/8/2016	14:00:00	USER				Arrived on location met with company rep to discuss job process and concerns
Event	3	Other	Other	10/8/2016	14:02:00	USER				TD-17248 TP-17244 FC-17190 SURF-1565 MUD-10.2 Casing 5.5 20#
Event	4	Start Job	Start Job	10/8/2016	20:34:17	COM4				Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	10/8/2016	20:45:36	COM4	5062.00	8.48	0.00	Pressure tested pumps and lines found no leaks and pressure held good 5020psi
Event	6	Pump Spacer 1	Pump Spacer 1	10/8/2016	20:52:42	COM4	318.00	11.51	3.30	Mixed 50bbl of 11.5ppg Tuned Spacer III at 5.0bpm 506psi
Event	7	Pump Lead Cement	Pump Lead Cement	10/8/2016	21:07:05	COM4	643.00	13.33	8.00	Mixed 2175sks or 615bbl of 13.2ppg Y1.57 G/sk7.49 ElastiCem at 8.0bpm 350psi
Event	8	Check Weight	Check weight	10/8/2016	21:14:34	COM4				Confirmed weight of 13.2ppg on scales
Event	9	Shutdown	Shutdown	10/8/2016	22:37:42	COM4				Shut down so that rig can blow lines clear with air
Event	10	Clean Lines	Clean Lines	10/8/2016	22:37:51	COM4				Washed pumps and lines with fresh water
Event	11	Drop Top Plug	Drop Top Plug	10/8/2016	22:37:56	COM4				KLX tool hand released plug witnessed by company rep
Event	12	Pump Displacement	Pump Displacement	10/8/2016	22:51:12	COM4	4.00	8.37	3.90	Pumped 379.8 bbl of fresh water to displace cement
Event	13	Bump Plug	Bump Plug	10/8/2016	23:44:49	COM4	2410.00	8.30	0.00	Bumped plug 500psi over final pump pressure
Event	14	Other	Other	10/8/2016	23:48:03	COM4	2108.00	8.30	0.00	Released pressure back to pump to check floats/ Floats held good 3.0bbl back
Event	15	Other	Other	10/8/2016	23:50:41	COM4				Pumped 8bbl to rupture plug and for wet shoe
Event	16	End Job	End Job	10/8/2016	23:59:46	COM4				30bbl of cement back to surface

## 3.0 Attachments

### 3.1 Custom Results – Job Chart with Events





3.2 Custom Results – Job Chart without Events

