

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America

Date: Wednesday, October 12, 2016

Varra #4

Production

Job Date: Saturday, October 08, 2016

Sincerely,

Lauren Roberts

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Varra #4** 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.

55 bbl. 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]

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3563401		Quote #:		Sales Order #: 0903583397				
Customer: EXTRACTION OIL & GAS				Customer Rep: Shane						
Well Name: VARRA			Well #: 4		API/UWI #: 05-123-39983-00					
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: NW SW-5-6N-67W-1667FSL-790FWL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nathaniel Moore						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		17130ft		Job Depth TVD						
Water Depth				Wk Ht Above Floor						
Perforation Depth (MD)		From		To						
Well Data										
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	1600	0	1600
Casing		5.5	4.778	20			0	17100	0	7130
Open Hole Section			7.875				1600	17100	1600	7130
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			17130		Top Plug	5.5	1	KLX	
Float Shoe	5.5					Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		HES	
Stage Tool	5.5					Centralizers	5.5		HES	
Fluid Data										
Stage/Plug #: 1										
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	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		5		
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)							
0.30 gal/bbl		MUSOL A, 330 GAL TOTE – (790828)							
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 Lead	ELASTICEM™ SYSTEM	150	sack	13.2	1.57		5	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 W/ Super CBL	ELASTICEM™ SYSTEM	2050	sack	13.2	1.57		5	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	380	bbl	8.33			8	
Cement Left In Pipe		Amount	ft		Reason			Shoe Joint	

50 bbl spacer and 55 bbl cement to surface

2.0 Real-Time Job Summary

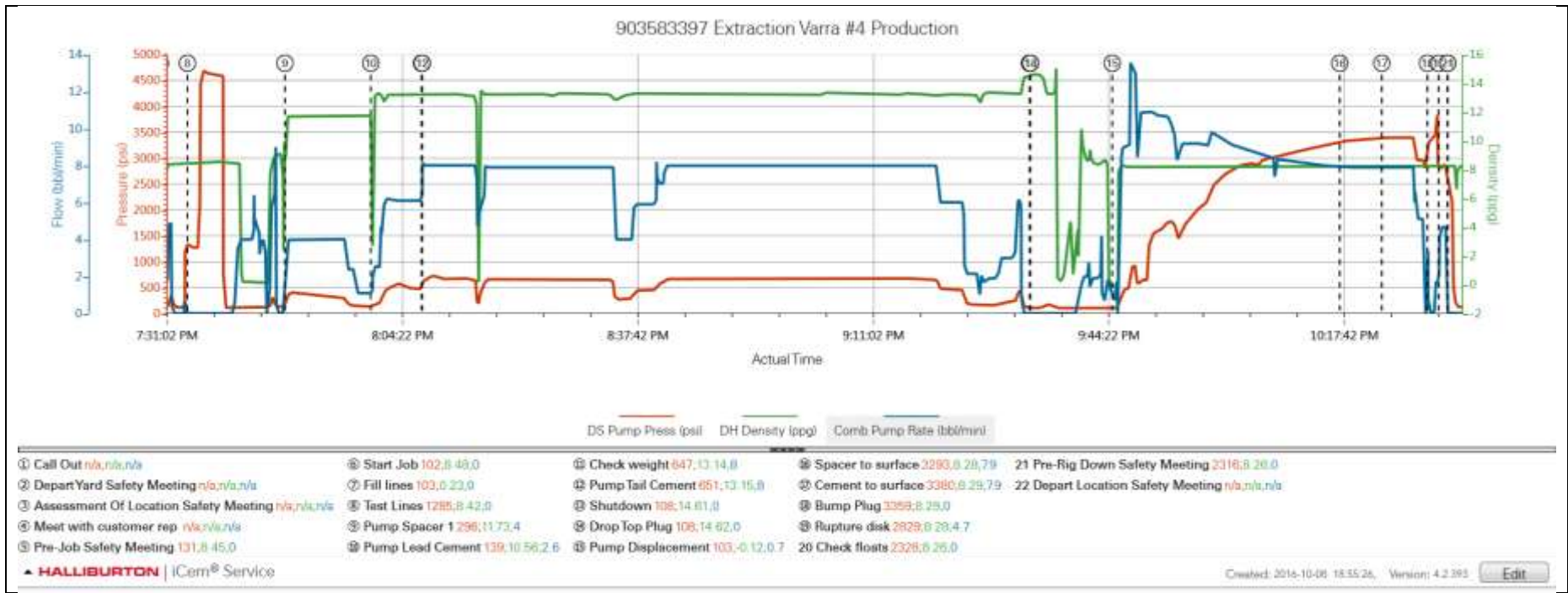
2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	10/8/2016	12:00:00	USER	OL time 1800. Verify equipment and materials
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	10/8/2016	16:00:00	USER	
Event	3	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/8/2016	17:00:00	USER	Spot in and rig up equipment
Event	4	Other	Meet with customer rep	10/8/2016	17:30:00	USER	Rig almost on bottom. TD 17130' 7.875" open hole. TP 17130' 5.5" 20# p-110 casing. TVD 7000'. Surface 1600' 9.625" 36# J-55. MW 9.5 ppg PV 9 YP 7. Water tested PH 7 Chlorides <50 Sulfates <200 Temp 65 degrees
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/9/2016	19:00:00	USER	Discuss job procedure
Event	6	Start Job	Start Job	10/9/2016	19:29:49	COM1	
Event	7	Other	Fill lines	10/9/2016	19:30:28	COM1	Fill lines 3 bbl water
Event	8	Test Lines	Test Lines	10/9/2016	19:34:18	COM1	500 psi kickout test followed by 5000 psi pressure test
Event	9	Pump Spacer 1	Pump Spacer 1	10/9/2016	19:48:07	COM1	50 bbl tuned spacer. 11.5 ppg verified with pressurized scales. Surfactants added.
Event	10	Pump Lead Cement	Pump Lead Cement	10/9/2016	20:00:16	COM1	150 sks/42 bbl 13.2 ppg 1.57 ft3/sk 7.48 gal/sk
Event	11	Check Weight	Check weight	10/9/2016	20:07:27	COM1	13.2 ppg
Event	12	Pump Tail Cement	Pump Tail Cement	10/9/2016	20:07:33	COM1	2050 sks/ 573 bbl 13.2 ppg 1.57 ft3/sk 7.49 gal/sk
Event	13	Shutdown	Shutdown	10/9/2016	21:33:31	COM1	Blow lines down with rig air. Wash pumps and lines to tank
Event	14	Drop Top Plug	Drop Top Plug	10/9/2016	21:33:40	COM1	KLX 3000 psi burst plug
Event	15	Pump Displacement	Pump Displacement	10/9/2016	21:45:14	COM1	380 bbl water displacement
Event	16	Other	Spacer to surface	10/9/2016	22:17:26	COM1	273 bbl inot displacement
Event	17	Other	Cement to surface	10/9/2016	22:23:23	COM1	325 bbl into displacement. 55 bbl cement to surface
Event	18	Bump Plug	Bump Plug	10/9/2016	22:29:51	COM1	2900 psi final pump pressure. Pressured up to 3200

Event	19	Other	Rupture disk	10/9/2016	22:31:27	COM1	3742 psi. Pump 5 bbl wet shoe
Event	20	Other	Check floats	10/9/2016	22:32:42	COM1	3 bbl back. Floats held
Event	21	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/9/2016	22:32:43	USER	
Event	22	Depart Location Safety Meeting	Depart Location Safety Meeting	10/9/2016	23:55:00	USER	

3.0 Attachments

3.1 Case 1-Custom Results.png



3.2 Case 1-Custom Results (1).png

