HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS

For: Ty Entenmann

Date: Thursday, January 21, 2016

Johnson Trust #2

Production Casing

Job Date: Monday, January 18, 2016

Sincerely,

Derek Trier

Legal Notice

Warning Disclaimer

Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

Limitations of Liability

Except as expressly set forth herein, there are no representations or warranties by Halliburton, express or implied, including implied warranties of merchantability and/or fitness for a particular purpose. In no event will Halliburton or its suppliers be liable for consequential, incidental, special, punitive or exemplary damages (including, without limitation, loss of data, profits, use of hardware, or software). Customer accepts full responsibility for any investment made based on results from the Software. Any interpretations, analyses or modeling of any data, including, but not limited to Customer data, and any recommendation or decisions based upon such interpretations, analyses or modeling are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional may differ. Accordingly, Halliburton cannot and does not warrant the accuracy, correctness or completeness of any such interpretation, recommendation, modeling or other products of the Software Product. As such, any interpretation, recommendation or modeling resulting from the Software for the purpose of any drilling, well treatment, production or financial decision will be at the sole risk of Customer. Under no circumstances will Halliburton or its suppliers be liable for any damages.

Table of Contents

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Johnson Trust #2** 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.

The erratic rate and pressure throughout displacement was caused by an accumulation of cement behind a valve, that wasn't sealing properly. The cement then broke loose and was sucked into the positive displacement pump causing the fluctuation in pressure. The possible solution discussed on location was to shutdown cement pump and attempt to remove any debris in the suction header on the positive displacement pump. The risks associated with that option were excessive down time during cement transition period and inability to resume pumping displacement with cement pump. After discussing options, Company Representative and Supervisor decided to continue pumping while fluctuations in pressure were monitored and verified utilizing the Martin Decker gauge.

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]

Job Times

	Date	Time	Time Zone
Called Out Time:	1/18/2016	1400	MTN
Arrived On Location At:		1800	
Job Started At:		2250	
Job Completed At:		0216	
Departed Location At:		0400	

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3699338	**Quote #:** 0022141834	**Sales Order #:** 0903060823
Customer: EXTRACTION OIL & GAS		**Customer Rep:** HUGH	
Well Name: JOHNSON TRUST	**Well #:** 2		**API/UWI #:** 05-123-42318-00
Field: WATTENBERG	**City (SAP):** LONGMONT	**County/Parish:** WELD	**State:** COLORADO
Legal Description: NW SW-13-2N-68W-2237FSL-389FWL			
Contractor: PATTERSON-UTI ENERGY		**Rig/Platform Name/Num:** PATTERSON 346	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		**Srvc Supervisor:** Christopher Pickell	

Job

Formation Name					
Formation Depth (MD)	**Top**		**Bottom**		
Form Type			**BHST**		
Job depth MD	12340ft		**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	1588		
Casing		5.5	4.778	20			0	12380		0
Open Hole Section			7.875				1588	12386		0

Tools and Accessories

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	1	HES	12380		Bottom Plug	5.5		
Float Collar	5.5	1	HES	12375		SSR plug set	5.5		
Insert Float	5.5					Plug Container	5.5	1	HES
Stage Tool	5.5					Centralizers	5.5		

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	6	5	

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	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.6	7.68	6	

HALLIBURTON

Cementing Job Summary

7.68 Gal		FRESH WATER							
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	ELASTICEM (TM) SYSTEM	1450	sack	13.2	1.6	7.69	8	
7.69 Gal		FRESH WATER							
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	275	bbl	8.33			8	
Cement Left In Pipe	**Amount**	5 ft		**Reason**			Shoe Joint		

Comment ALL SCALED MIXED WITHIN RANGE. RETURNED 50 BBL OF TUNED SPACER AND 32 BBL OF CEMENT TO SURFACE. SHEERED PLUG AND PUMPED THE DESIRED 5 BBL OVER FOR THE TOE SLEEVE WET SHOE.

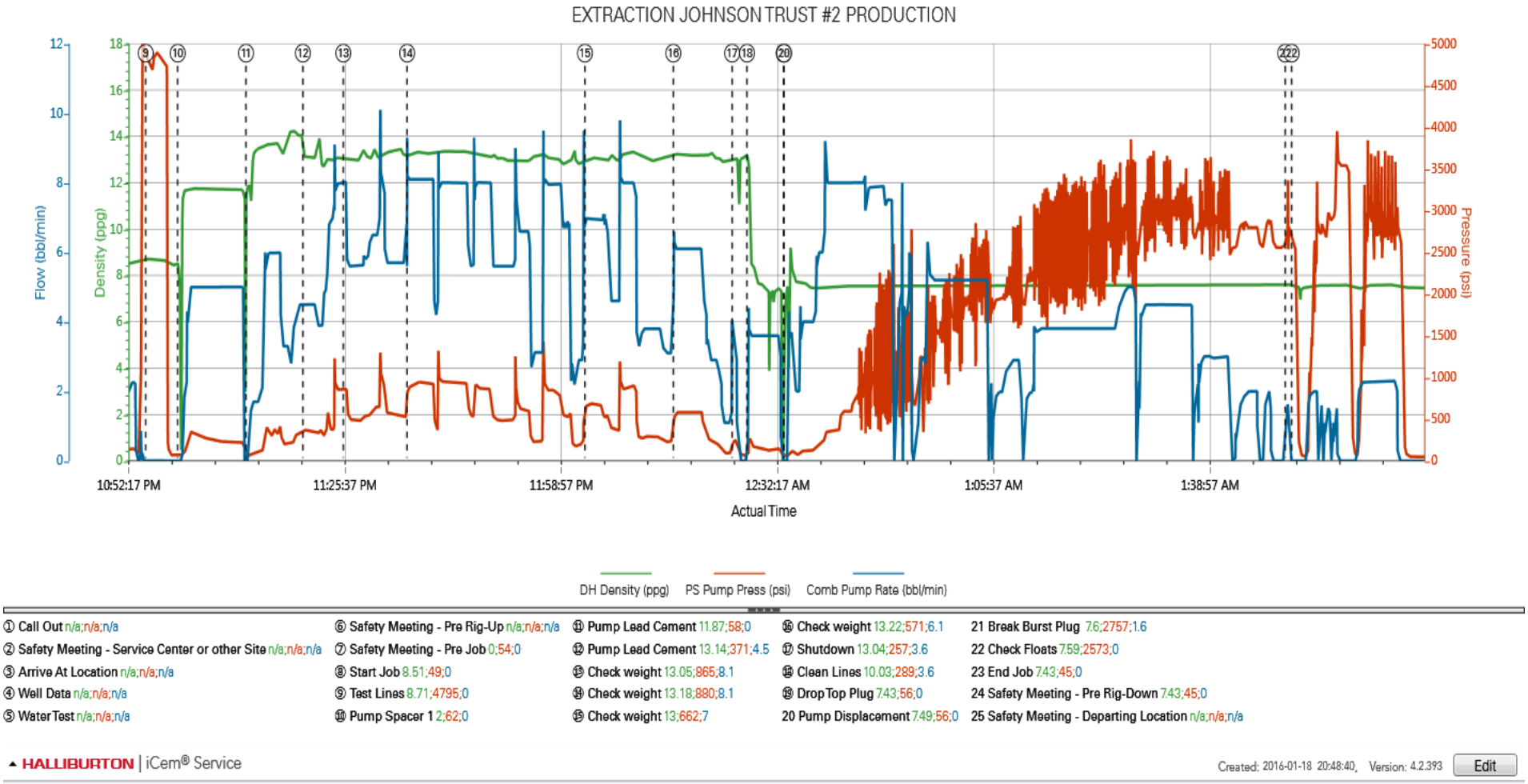
2.0 Real-Time Job Summary

2.1 Job Event Log

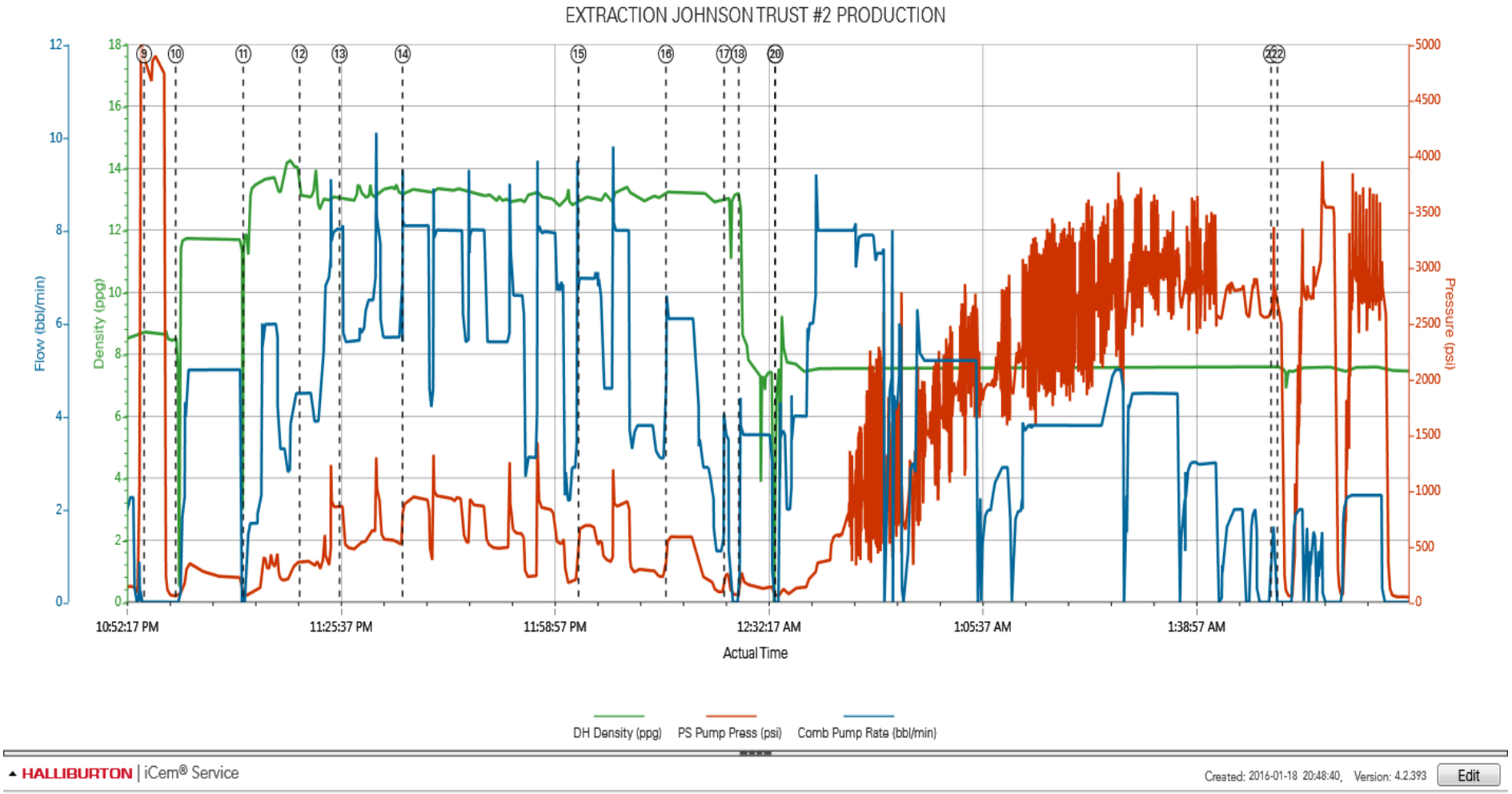
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pass-Side Pump Pressure (psi)	Comments
Event	1	Call Out	Call Out	1/18/2016	14:00:00	USER				Crew called out at 14:00 to be on location at 19:30. Crew was Chris Pickell, Nick Roles, Weston Eaves, Devin Cook, Tom Gallegos, Lauren Roberts, Lance Landvater
Event	2	Safety Meeting - Service Center or other Site	Safety Meeting - Service Center or other Site	1/18/2016	17:30:00	USER				Safety meeting held for journey, equipment double checked. Left the yard for location
Event	3	Arrive At Loc	Arrive At Location	1/18/2016	18:00:00	USER				Arrive on location 1.5 hours early. Rig had 4000 ft of casing left to run.
Event	4	Other	Well Data	1/18/2016	18:05:00	USER				TD 12386'. TP 12380' 5 1/2" 20#. SJ 5'. 7 7/8" OH. TVD 7500'. SURFACE 1588' 9 5/8" 36#.
Event	5	Other	Water Test	1/18/2016	18:10:00	USER				TEMP 72. PH 7 IRON 0 CHLORIDES 0 SULFATES <200 TH 215
Event	6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	1/18/2016	18:30:00	USER				Safety meeting held for rig up, spotted in trucks, rigged up all equipment.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	1/18/2016	22:30:00	USER				Safety meeting held with rig crew to discuss job safety and procedure
Event	8	Start Job	Start Job	1/18/2016	22:50:49	COM6				
Event	9	Test Lines	Test Lines	1/18/2016	22:54:30	USER	8.33	0.00	4500.00	Pressure test lines to 4500 psi. Checked for visible leaks and pressure loss
Event	10	Pump Spacer 1	Pump Spacer 1	1/18/2016	23:00:12	COM6	2.00	5.00	62.00	Pump 50 bbl of Tuned Spacer 11.5# 3.74 yield 24.1 gal/sk
Event	11	Pump Lead Cement	Pump Lead Cement	1/18/2016	23:10:44	COM6	13.20	6.00	58.00	Pump 150 sks 43 bbl 13.2 ppg 1.6 yield 7.68 gal/sk
Event	12	Pump Lead Cement	Pump Lead Cement	1/18/2016	23:19:30	COM6	13.14	4.50	371.00	Pump 1450 sks 13.2 ppg 1.6 yield 7.68 gal/sk
Event	13	Check Weight	Check weight	1/18/2016	23:25:44	COM6	13.05	8.10	865.00	Cement scaled at 13.2#

Event	14	Check Weight	Check weight	1/18/2016	23:35:34	COM6	13.18	8.10	880.00	Cement scaled at 13.1#
Event	15	Check Weight	Check weight	1/19/2016	00:02:58	COM6	13.00	7.00	662.00	Cement scaled at 13.4#
Event	16	Check Weight	Check weight	1/19/2016	00:16:36	COM6	13.22	6.10	571.00	Cement scaled at 13.2#
Event	17	Shutdown	Shutdown	1/19/2016	00:25:40	USER	13.04	3.60	257.00	
Event	18	Clean Lines	Clean Lines	1/19/2016	00:27:57	COM6				Wash pumps and lines to the pit
Event	19	Drop Top Plug	Drop Top Plug	1/19/2016	00:33:36	COM6				Drop rupture disk plug on the fly while shutdown
Event	20	Pump Displacement	Pump Displacement	1/19/2016	00:33:40	COM6	8.33	4.00	100-2900	Pump displacement using water. Pump cavitated throughout displacement causing us to have to have a lower rate. Martin decker gauge held steady througout displacement
Event	21	Other	Break Burst Plug	1/19/2016	01:50:55	USER	8.33	1.60	2757.00	Blow burst plug with 3600 psi. Pump 5 bbl of water over for an intentional wet shoe for frac sleeve.
Event	22	Check Floats	Check Floats	1/19/2016	01:51:54	USER	8.33	0.00	2573.00	Pressure was held for 2 minutes then released. Floats held. 2 bbl back to tanks
Event	23	End Job	End Job	1/19/2016	02:16:49	COM6				Returned all 50 bbl of spacer and 37 bbl of cement to surface
Event	24	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	1/19/2016	02:17:13	USER				Safety meeting held for rig down. Rigged down all equipment
Event	25	Safety Meeting - Departing Location	Safety Meeting - Departing Location	1/19/2016	04:00:00	USER				Safety meeting held for journey. Left location for yard

2.2 Job Chart with Events



2.3 Job Chart


EXTRACTION JOHNSON TRUST #2 PRODUCTION
Flow (bbl/min)
Density (ppg)
Pressure (psi)
10:52:17 PM
11:25:37 PM
11:58:57 PM
12:32:17 AM
1:05:37 AM
1:38:57 AM
Actual Time
DH Density (ppg)
PS Pump Press (psi)
Comb Pump Rate (bbl/min)
HALLIBURTON | iCem® Service
Created: 2016-01-18 20:48:40, Version: 4.2.393
Edit