

# HALLIBURTON

iCem<sup>®</sup> Service

## **Advanced Extraction Technologies**

Date: Friday, February 19, 2016

## **Johnson Trust #8 Production**

Job Date: Sunday, February 07, 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 **Johnson Trust #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.

#### **20 barrels 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]**

## HALLIBURTON

## Cementing Job Summary

## The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3699390	Quote #:	Sales Order #: 0903108049							
Customer: EXTRACTION OIL & GAS		Customer Rep: LARY								
Well Name: JOHNSON TRUST	Well #: 8	API/UWI #: 05-123-42315-00								
Field: WATTENBERG	City (SAP): LONGMONT	County/Parish: WELD	State: COLORADO							
Legal Description: NW SW-13-2N-68W-2069FSL-388FWL										
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 346								
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199		Srv Supervisor: Jarnail Singh								
<b>Job</b>										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	12038ft	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	29			0	1556		1558
Casing		5.5	4.778	20			0	12100		7330
Open Hole Section			7.875				1556	12100		7330
<b>Tools and Accessories</b>										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	5.5			12038	Top Plug	5.5		HES		
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	1	HES		
Stage Tool	5.5				Centralizers	5.5		HES		
<b>Miscellaneous Materials</b>										
Gelling Agt		Conc		Surfactant		Conc	Acid Type		Qty	Conc
Treatment Fld		Conc		Inhibitor		Conc	Sand Type		Size	Qty
<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		
36.09 gal/bbl		FRESH WATER								
0.24 gal/bbl		MUSOL(R) A, BULK (100003696)								
0.24 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

last updated on 2/16/2016 10:19:20 AM

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## HALLIBURTON

## Cementing Job Summary

149.34 lbm/bbl		BARITE, BULK (100003681)							
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	1.571		8	7.53
7.53 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	200	sack	13.2	1.6		8	7.69
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	ElastiCem	ELASTICEM (TM) SYSTEM	1172	sack	13.2	1.572		8	7.54
7.54 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
5	MMCR Displacement	MMCR Displacement	0	bbl	8.33			8	
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 1 GAL PAIL (100003780)							
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
6	Displacement	Displacement	264	bbl	8.33			8	
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint	

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbl/min)	Downhole Density (ppg)	Pass-Side Pump Pressure (psi)	Comments
Event	1	Call Out	Call Out	2/6/2016	22:30:00	USER				HES CREW CALLED OUT AT 1030 PM ON 1/6/16 REQUESTED ON LOCATION AT 5 AM ON 2/7/16
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	2/7/2016	02:00:00	USER				HES CREW DISCUSSED THE HAZARDS OF DRIVING TO LOCATION
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	2/7/2016	02:15:00	USER				DEPART FROM YARD TO LOCATION
Event	4	Arrive At Location	Arrive At Location	2/7/2016	03:00:00	USER				ARRIVE AT LOCATION 2 HOURS EARLY AND RIG WAS STILL RUNNING CASING 5.5 20# TP 12038.27 SHOE 44.19. PRE 9 5/8 29# SET @ 1558
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/7/2016	03:05:00	USER				HES CREW DISCUSSED HOW TO SAFELY SPOT EQUIPMENT
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/7/2016	03:20:00	USER				HES CREW DISCUSSED THE HAZARDS OF RIGGING UP EQUIPMENT
Event	7	Rig-Up Equipment	Rig-Up Equipment	2/7/2016	03:30:00	USER				RIG-UP ALL IRON AND WATER LINES
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/7/2016	08:00:00	USER				HES AND RIG CREW DISCUSSED THE HAZARDS OF RIGGING UP THE RIG FLOOR AND PUMPING THE JOB
Event	9	Rig-Up Completed	Rig-Up Complete	2/7/2016	08:35:00	USER				RIG-UP OF LINES ON GROUND AND FLOOR COMPLETE
Event	10	Start Job	Start Job	2/7/2016	09:06:56	COM1				START JOB
Event	11	Test Lines	Test Lines	2/7/2016	09:16:40	COM1				TEST LINES TO 5000 PSI FOR 2 MINS
Event	12	Pump Spacer 1	Pump Spacer 1	2/7/2016	09:22:52	COM1	0.00	8.22	5.00	PUMP 50 BBLS TUNES SPACER @ 11.5 PPG 3.74 YIELD 23.8 GAL/SK WITH 12 GAL DUAL SPACER SURFACTANT B AND 12 GAL MUSOL A.
Event	13	Pump Lead Cement	Pump Lead Cement	2/7/2016	09:36:37	COM1	0.00	-0.10	13.00	PUMP 42 BBLS LEAD @ 13.2 PPG 150 SKS 1.57 YIELD 7.53 GAL/SK
Event	14	Pump Tail Cement	Pump Tail Cement	2/7/2016	09:50:23	COM1	5.90	13.27	260.00	PUMP 384.12 BBLS TAIL @ 13.2 PPG 1372SKS 1.57

YIELD 7.54 GAL/SK

Event	15	Shutdown	Shutdown	2/7/2016	10:47:36	COM1	0.00	13.06	69.00	SHUTDOWN AND CLEAN LINES
Event	16	Drop Top Plug	Drop Top Plug	2/7/2016	10:54:41	COM1	0.00	15.77	5.00	DROP TOP PLUG AND COMPANY MAN WITNESSED
Event	17	Pump Displacement	Pump Displacement	2/7/2016	10:54:46	COM1	0.00	16.13	4.00	PUMP 264 BBLS H2O DISPLACEMENT
Event	18	Bump Plug	Bump Plug	2/7/2016	11:32:33	USER	5.00	7.98	2555.00	BUMP PLUG @ 2500 PSI TOOK IT UP TO 3000 PSI.
Event	19	Check Floats	Check Floats	2/7/2016	11:36:23	USER	0.00	7.97	99.00	FLOATS HELD GOT 2.5 BBLS BACK TO HES PUMP
Event	20	Other	Other	2/7/2016	11:39:44	USER	2.10	7.96	4116.00	PLUG SEAL OPENED @ 4120 PSI AND PUMPED 5 BBLS
Event	21	End Job	End Job	2/7/2016	11:51:17	COM1	0.00	7.93	8.00	END JOB
Event	22	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/7/2016	12:00:00	USER	3.50	8.05	37.00	HES CREW DISCUSSED THE HAZARDS OF RIGGING DOWN EQUIPMENT
Event	23	Rig-Down Completed	Rig-Down Completed	2/7/2016	13:30:00	USER				RIG-DOWN COMPLETED SAFELY
Event	24	Depart Location Safety Meeting	Depart Location Safety Meeting	2/7/2016	13:40:00	USER				HES CREW DISCUSSED THE HAZARDS OF DRIVING
Event	25	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/7/2016	13:50:00	USER				HES CREW DEPART FOR SERVICE CENTER
Event	26	Job Complete	Job Complete	2/7/2016	14:00:00	USER				JOB COMPLETE, GOT 50 BBLS TUNED SPACER AND 20 BBLS CMT BACK TO SURFACE



3.0 Attachments

3.1 EXTRACTION OIL N GAS JOHNSON TRUST 8



