

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

United States of America

Date: Saturday, December 17, 2016

### **TC Hiland Knolls C7-9-11**

Surface

Job Date: Tuesday, December 06, 2016

Sincerely,

**Justin Lansdale**

## Legal Notice

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### Disclaimer:

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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 **TC Hiland Knolls C7-9-11** cement **Surface** 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.

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 [Fort Lupton]**

*The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3754107		Quote #:		Sales Order #: 0903695538				
Customer: EXTRACTION OIL & GAS				Customer Rep: Hans Cary						
Well Name: TC HILAND KNOLLS			Well #: C7-9-11			API/UWI #: 05-123-43513-00				
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO				
Legal Description: NE SE-8-5N-66W-2600FSL-1189FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341						
Job BOM: 7521										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nathaniel Moore						
Job										
Job depth MD		1580ft		Job Depth TVD						
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
Open Hole Section			13.5				0	1580		
Casing		9.625	8.921	36			0	1580		
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	9.625					Top Plug	9.625	1	HES	
Float Shoe	9.625			1565		Bottom Plug	9.625		HES	
Fluid Data										

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	Water with dye	Water with dye	10	bbl	8.34				
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	SwiftCem	SWIFTCEM I SYSTEM	525	sack	13.5	1.74			9.2
94 lbm		TYPE I / II CEMENT, BULK (101439798)							
9.18 Gal		FRESH WATER							
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
3	Displacement	Displacement	117	bbl	8.34				
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint	

25 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	12/6/2016	05:00:00	USER	OL time 0930. Verify equipment and materials
Event	2	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/6/2016	09:00:00	USER	spot in and rig up bulk trucks
Event	3	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/6/2016	15:00:00	USER	Rig circulating. TD 1585' 13.5" open hole. TP 1565' 9.625" 36# J-55.
Event	4	Start Job	Start Job	12/6/2016	15:20:18	COM1	Fill lines 3 bbl water
Event	5	Test Lines	Test Lines	12/6/2016	15:23:23	COM1	500 psi kickout test and 2500 psi pressure test
Event	6	Pump Spacer 1	Pump Spacer 1	12/6/2016	15:26:27	COM1	10 bbl dyed water
Event	7	Pump Cement	Pump Cement	12/6/2016	15:35:39	COM1	525 sks/162 bbl 13.5 ppg 1.74 ft3/sk 9.2 gal/sk

Event	8	Drop Top Plug	Drop Top Plug	12/6/2016	16:08:23	COM1	Washup on top of plug. Witnessed by company rep
Event	9	Pump Displacement	Pump Displacement	12/6/2016	16:08:33	COM1	117 bbl water displacement
Event	10	Other	Dye to surface	12/6/2016	16:18:29	COM1	70 bbl into displacement
Event	11	Other	Cement to surface	12/6/2016	16:19:33	COM1	80 bbl into displacement. 25 bbl cement back
Event	12	Bump Plug	Bump Plug	12/6/2016	16:31:25	COM1	550 psi final circulating pressure. Pressured up to 1500 psi for 15 minute casing test
Event	13	Other	Check floats	12/6/2016	16:46:03	USER	1 bbl back. Floats held
Event	14	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	12/6/2016	16:48:00	USER	
Event	15	End Job	End Job	12/6/2016	16:59:51	COM1	



Event	16	Depart Location Safety Meeting	Depart Location Safety Meeting	12/7/2016	18:00:00	USER
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## 2.2 Custom Graph

