

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America

Date: Sunday, March 26, 2017

TC Hiland Knolls 3-9-11

Production

Job Date: Thursday, March 09, 2017

Sincerely,

Justin Lansdale

Legal Notice

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Table of Contents

Cementing Job Summary 4

 Executive Summary4

Real-Time Job Summary 7

 Job Event Log.....7

 Custom Graph.....9

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **TC Hiland Knolls 3-9-11** 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.

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 #: 3754137		Quote #:		Sales Order #: 0903889544				
Customer: EXTRACTION OIL & GAS						Customer Rep: Larry				
Well Name: TC HILAND KNOLLS				Well #: 3-9-11		API/UWI #: 05-123-43516-00				
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO				
Legal Description: NE SE-8-5N-66W-2616FSL-1190FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 341						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Jefferson Bone						
Job										
Job depth MD		20260ft		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	1606	0	1606
Casing		5.5	4.778	20			0	20260	0	7060
Open Hole Section			8.5				1606	20350	1606	7060
Tools and Accessories										
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		
0.30 gal/bbl		MUSOL A, 330 GAL TOTE - (790828)								
149.34 lbm/bbl		BARITE, BULK (100003681)								
36.09 gal/bbl		FRESH WATER								
0.30 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
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 W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	ElastiCem	ELASTICEM (TM) SYSTEM	3100	sack	13.2	1.57		6	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	447	bbl	8.33			8	
Cement Left In Pipe		Amount	ft	Reason				Shoe Joint	
Plug Bumped?		Yes	Bump Pressure: 2800 psi			Floats Held?		Yes	
Cement Returns:		70 bbl							
Comment 70 bbls of 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	3/8/2017	10:00:00	USER	Called out
Event	2	Arrive at Location from Other Job or Site	Arrive at Location from Other Job or Site	3/8/2017	14:00:00	USER	Arrived on location. Held Safety Meeting Prior to rigging up or spotting equipment.
Event	3	Start Job	Start Job	3/9/2017	00:28:37	COM4	Start Job
Event	4	Prime Pumps	Prime Pumps	3/9/2017	00:29:11	COM4	Prime Pumps
Event	5	Test Lines	Test Lines	3/9/2017	00:32:11	COM4	Test Lines to 4500 PSI
Event	6	Pump Spacer 1	Pump Spacer 1	3/9/2017	00:36:43	COM4	Pumped 50 bbls of 11.5ppg Tuned Spacer
Event	7	Pump Lead Cement	Pump Lead Cement	3/9/2017	00:49:10	COM4	Pump 150 sks (42 bbls) of 13.2ppg 1.57y 7.48w Elasticem cement.
Event	8	Pump Tail Cement	Pump Tail Cement	3/9/2017	01:01:14	COM4	Pumped 3100 sks (867 bbls) of 13.2ppg 1.57y 7.49w of Elasticem Cement.
Event	9	Drop Top Plug	Drop Top Plug	3/9/2017	03:09:39	COM4	Drop Top Plug
Event	10	Pump Displacement	Pump Displacement	3/9/2017	03:09:48	COM4	Pumped 447bbls of H2O Displacement. 70bbls of Cement back to surface.

Event	11	Bump Plug	Bump Plug	3/9/2017	03:58:14	USER	Bumped Plug @ 2300psi
Event	12	Break Circulation	Burst Plug	3/9/2017	03:59:14	USER	Burst Plug @ 3800psi
Event	13	Pump Well Fluid	Pump wet shoe	3/9/2017	04:00:26	USER	Pumped 5 bbls of h2O Wet shoe.
Event	14	Check Floats	Check Floats	3/9/2017	04:02:00	USER	Check Floats 3bbls back.
Event	15	End Job	End Job	3/9/2017	04:12:05	COM4	
Event	16	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	3/9/2017	06:00:00	USER	Depart Location. Held safety meeting prior to rigging down or spotting equipment.

2.2 Custom Graph

