

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Saturday, February 11, 2017

TC Country Club West C3-9-11 Production

Job Date: Tuesday, January 24, 2017

Sincerely,

Julia Nichols

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Table of Contents

1.0	Cementing Job Summary	4
1.1	Executive Summary	4
2.0	Real-Time Job Summary	7
2.1	Job Event Log	7
3.0	Attachments.....	9
3.1	Custom Results – Job Chart with Events	9
3.2	Custom Results – Job Chart without Events.....	10

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **TC Country Club West C3-9-11** 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.

Approximately 70 barrels of cement were 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 389404	Ship To #: 3754104	Quote #:	Sales Order #: 0903786455
Customer: EXTRACTION OIL & GAS		Customer Rep: Larry Siegel	
Well Name: TC COUNTRY CLUB WEST	Well #: C3-9-11	API/UWI #: 05-123-43510-00	
Field: WATTENBERG	City (SAP): GREELEY	County/Parish: WELD	State: COLORADO
Legal Description: SE NE-8-5N-86W-2510FNL-1194FEL			
Contractor: PATTERSON-UTI ENERGY		Rig/Platform Name/Num: PATTERSON 341	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srcv Supervisor: Michael Loughran	
Job			

Formation Name			
Formation Depth (MD)	Top	Bottom	
Form Type	BHST		
Job depth MD	20367ft	Job Depth TVD	7250
Water Depth		Wk Ht Above Floor	5
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		8.625	8.921	36	8 RD	J-55	0	1583	0	1583
Casing	0	5.5	4.778	20		P-110	0	20345	0	7250
Open Hole Section			8.5				1583	20367	1583	7250

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	DL	20345	Bottom Plug	5.5		HES	
Float Collar	5.5	1	DL	20340.5	SSR plug set	5.5		HES	
Insert Float	5.5				Plug Container	5.5	1	HES	
Stage Tool	5.5				Centralizers	5.5		HES	

Fluid Data										
Stage/Plug #: 1										
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	
1	11.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	11.5	3.74		6		
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	

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Cementing Job Summary

2	ElastiCem W/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		6	7.48
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	3110	sack	13.2	1.57		6	7.49
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	451.6	bbl	8.33			8	
Cement Left In Pipe	Amount	ft	Reason		Shoe Joint				
Comment 70 bbls cement to surface									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	1/24/2017	20:30:00	USER				Crew called out for on location ASAP
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	1/24/2017	00:20:00	USER				Journey management meeting prior to departure
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	1/24/2017	00:30:00	USER				Journey called into dispatch
Event	4	Arrive At Loc	Arrive At Loc	1/24/2017	01:30:00	USER				Crew arrives with all equipment and materials. Rig running casing
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/24/2017	01:40:00	USER				JSA to discuss hazards of rig-up
Event	6	Rig-Up Equipment	Rig-Up Equipment	1/24/2017	01:50:00	USER				Rig up all surface lines and equipment
Event	7	Rig-Up Completed	Rig-Up Completed	1/24/2017	02:30:00	USER				With no incidents or injuries
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/24/2017	10:50:00	USER				With all essential personnel
Event	9	Circulate Well	Circulate Well	1/24/2017	10:56:00	USER				Circulate at 10 bbl min, 9.2 # mud, 2000 psi
Event	10	Start Job	Start Job	1/24/2017	12:59:04	COM1				With water supplied from uprights. Water tested good to mix cement. Temp 53 Degrees, Chlorides Zero, PH 7.0
Event	11	Test Lines	Test Lines	1/24/2017	13:10:42	COM1	0.00	8.94	4721.00	HMS pressure test to 5000 PSI
Event	12	Pump Spacer 1	Pump Spacer 1	1/24/2017	13:14:33	COM1	2.50	11.89	190.00	Pump 50 Bbls. Tuned Spacer @ 11.5 Ppg
Event	13	Pump Cement	Pump Cement	1/24/2017	13:30:46	COM1	7.90	13.08	846.00	Pump Lead cement w/o Super CBL. 150 sacks, 41.94 Bbls @ 13.2 Ppg
Event	14	Shutdown	Shutdown	1/24/2017	13:32:02	USER	4.80	12.81	356.00	Shutdown due to air loss on 660.
Event	15	Pump Cement	Pump Cement	1/24/2017	13:49:11	COM1	5.90	13.16	569.00	Pump primary cement w/ Super CBL. 3110 sacks, 869.60 Bbls @ 13.2 Ppg
Event	16	Shutdown	Shutdown	1/24/2017	15:53:59	COM1	2.30	13.28	118.00	Shutdown to blow lines down

Event	17	Clean Lines	Clean Lines	1/24/2017	15:59:51	COM1	0.00	-0.03	2.00	Wash pumps and lines to pit
Event	18	Drop Top Plug	Drop Top Plug	1/24/2017	16:04:06	COM1	0.00	8.02	4.00	Drop top plug by KLX
Event	19	Pump Displacement	Pump Displacement	1/24/2017	16:04:09	COM1	0.00	7.96	4.00	Pump 451.58 Bbls fresh water displacement
Event	20	Other	Other	1/24/2017	16:41:21	COM1	8.00	8.38	3333.00	Spacer returns to surface @ 330 bbls into displace
Event	21	Other	Other	1/24/2017	16:48:29	COM1	7.10	8.37	3310.00	Cement returns to surface @ 380 bbls into displace
Event	22	Pump Displacement	Pump Displacement	1/25/2017	17:02:11	USER	0.00	8.33	2318.00	5 bbl wet shoe
Event	23	Shutdown	Shutdown	1/25/2017	17:04:39	COM1	0.00	8.34	2320.00	Shutdown
Event	24	Check Floats	Check Floats	1/25/2017	17:05:30	USER	0.00	8.31	1453.00	Floats good. 4.5 bbls back
Event	25	End Job	End Job	1/25/2017	17:09:29	USER	0.00	8.29	5.00	Thanks, Mike Loughran and crew
Event	26	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/25/2017	17:15:00	USER				JSA to discuss Hazards of rig down
Event	27	Rig-Down Equipment	Rig-Down Equipment	1/25/2017	17:20:00	USER				Rig down all surface lines and equipment
Event	28	Rig-Down Completed	Rig-Down Completed	1/25/2017	18:30:00	USER				With no incidents or injuries
Event	29	Depart Location Safety Meeting	Depart Location Safety Meeting	1/25/2017	19:00:00	USER				Journey management meeting held prior to departure
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	1/25/2017	19:10:00	USER				Journey called into dispatch

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

