

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America

For:

Date: Saturday, December 17, 2016

Mickey #1

Production

Job Date: Monday, December 05, 2016

Sincerely,

Justin Lansdale

Legal Notice

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Table of Contents

Cementing Job Summary	4
Executive Summary	4
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 **Mickey #1** 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 #: 3766593		Quote #:		Sales Order #: 0903690853				
Customer: EXTRACTION OIL & GAS						Customer Rep: Kalyn Holgate				
Well Name: MICKEY			Well #: 1		API/UWI #: 05-123-43853-00					
Field: WATTENBERG		City (SAP): WINDSOR		County/Parish: WELD		State: COLORADO				
Legal Description: SW NE-5-6N-67W-2418FNL-1768FEL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 346						
Job BOM: 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srcv Supervisor: Vaughn Oteri						
Job										
Formation Name										
Formation Depth (MD)		Top			Bottom					
Form Type					BHST					
Job depth MD		17935 ft			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	1540		1540
Casing		5.5	4.778	20			0	17935	0	7201
Open Hole Section			7.875				1540	17948	0	7201
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			17935		Bottom Plug	5.5			
Float Collar	5.5			17896		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 ft/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		4	

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	ElastiCemW/O CBL	ELASTICEM (TM) SYSTEM	150	sack	13.2	1.57		5	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 W/ Super CBL	ELASTICEM (TM) SYSTEM	2125	sack	13.2	1.57		5	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	395.5	bbbl	8.33					
Cement Left In Pipe		Amount	40ft		Reason			Shoe Joint		
Comment 60bbbl of cement back 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	12/5/2016	22:00:00	USER	Call out from Arc hub
Event	2	Arrive At Loc	Arrive At Loc	12/5/2016	07:00:00	USER	Requested on location @0730 Arrived on location @0700 met with company rep to discuss job process and concerns
Event	3	Other	Other	12/5/2016	07:10:10	USER	TD-17948 TP-17935 FC-17896 OH-7 7/8 Surf 1540
Event	4	Start Job	Start Job	12/5/2016	16:03:00	COM4	Held pre-job safety meeting with all hands on location to discuss job process and hazards
Event	5	Test Lines	Test Lines	12/5/2016	16:10:44	COM4	Pressure tested pumps and lines with fresh water 4780psi
Event	6	Pump Spacer 1	Pump Spacer 1	12/5/2016	16:13:38	COM4	Mixed 50bbl of 11.5ppg Tuned spacer III at 4.0bpm 305psi
Event	7	Pump Cement	Pump Cement	12/5/2016	16:31:50	COM4	Mixed 2275sks or 636bbl of 13.2ppg Y-1.57 G/sk 7.48 Elasticem at 8.0bpm 645psi
Event	8	Check Weight	Check weight	12/5/2016	16:32:13	COM4	Confrimed weight of 13.2ppg on scales
Event	9	Shutdown	Shutdown	12/6/2016	17:59:00	COM4	
Event	10	Clean Lines	Clean Lines	12/6/2016	17:59:07	COM4	Washed pumps and lines with fresh water
Event	11	Drop Top Plug	Drop Top Plug	12/6/2016	17:59:12	COM4	KLX tool hand released plug witnessed by company rep

							and HES supervisor
Event	12	Pump Displacement	Pump Displacement	12/6/2016	18:09:40	COM4	Pumped 395bbl of fresh water to displace cement
Event	13	Bump Plug	Bump Plug	12/6/2016	19:15:02	COM4	Bumped plug 500psi over final pump pressure
Event	14	Other	Other	12/6/2016	19:20:44	COM4	Released pressure back to pump truck to check float, Floats did not hold
Event	15	Pressure Up	Pressure Up	12/6/2016	19:23:02	USER	Pressure back up and checked floats again, did not hold
Event	16	Pressure Up	Pressure Up	12/6/2016	19:29:12	USER	Pressure back up and checked floats again, did not hold
Event	17	Pressure Up	Pressure Up	12/6/2016	19:49:09	USER	Pumped all water back in to well and closed head and manifold in, wait on cement Recommended hold pressure for 8 hours but 4 hours min
Event	18	Shutdown	Shutdown	12/6/2016	20:19:54	COM4	
Event	19	End Job	End Job	12/6/2016	20:20:02	COM4	

2.2 Custom Graph

