

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

For: Chad Kelley

Date: Saturday, November 10, 2018

Duck Club 12W-20-3N

Job Date: Saturday, November 10, 2018

Sincerely,

Nick Roles and Crew

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the cement 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 50 bbls 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 Fort Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3894374		Quote #:		Sales Order #: 0905257988					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Chad Kelley							
Well Name: DUCK CLUB			Well #: 12W-20-3N		API/UWI #: 05-001-10165-00						
Field: WATTENBERG		City (SAP): BARR LAKE		County/Parish: ADAMS		State: COLORADO					
Legal Description: NW SW-12-1S-66W-2547FSL-693FWL											
Contractor:				Rig/Platform Name/Num: Cartel 88							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srvc Supervisor: Nicholas Roles							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1617ft		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	0	9.625	8.921	36	8 RD	J-55	0	1617	0	1617	
Open Hole Section			13.5				0	1617	0	1617	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1617		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625			1572		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625		HES		
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	Red Dye Spacer	Red Dye Spacer			10	bbl	8.33			6	

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	SwiftCem	SWIFTCEM (TM) SYSTEM	550	sack	13.5	1.74		8	9.2	
9.20 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	Fresh Water	Fresh Water	121	bbl	8.33			8		
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint		
Mix Water:		pH 06	Mix Water Chloride:		0 ppm		Mix Water Temperature:		55 °F °C	
Cement Temperature:		## °F °C		Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		55 °F °C
Plug Bumped?		Yes		Bump Pressure:		1000 psi MPa		Floats Held?		Yes
Cement Returns:		50bbl m3		Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Got 50bbbls cement to surface.										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	PS Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	11/9/2018	23:30:00	USER					Called out by Service Coordinator for O/L at 0130
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	11/9/2018	23:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	11/10/2018	00:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/10/2018	00:30:00	USER					Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Other	Other	11/10/2018	01:00:00	USER					Water test- PH-6, Chlor-0, Temp-55.
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/10/2018	02:30:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	11/10/2018	03:30:00	USER	0.05	-1.00	0.00	0.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	11/10/2018	03:57:11	COM4	8.43	3.00	6.60	0.00	TD-1617' 13.5", TP-1617' 9.625" 36#, FC-1572, Mud-9#
Event	9	Test Lines	Test Lines	11/10/2018	03:58:59	COM4	8.79	10.00	9.60	0.00	Pumped 3bbls to fill lines, established circulation, shutdown and closed

manifold, performed 500psi k/o function test, continued with 5th gear stall at 2600psi proceeded to bring pressure to 3000psi. Held good no leaks.											
Event	10	Pump Spacer 1	Pump Spacer 1	11/10/2018	04:04:24	COM4	8.67	2.00	0.00	0.00	Pumped 25bbls fresh water at 6bpm
Event	11	Pump Spacer 2	Pump Spacer 2	11/10/2018	04:10:20	COM4	8.78	148.00	0.00	0.00	Pumped 10bbls fresh water with 2# Red Dye at 6bpm 140psi.
Event	12	Pump Lead Cement	Pump Lead Cement	11/10/2018	04:14:19	COM4	8.74	5.00	0.00	0.00	Pumped 550sks or 170bbls 13.5# 1.74y 9.2g/s Swiftcem at 8bpm 310psi.
Event	13	Check Weight	Check Weight	11/10/2018	04:15:58	COM4	13.54	65.00	3.40	0.00	Weight verified with pressurized mud scales.
Event	14	Check Weight	Check Weight	11/10/2018	04:18:50	COM4	13.49	111.00	16.60	0.00	Weight verified with pressurized mud scales.
Event	15	Check Weight	Check Weight	11/10/2018	04:29:31	COM4	13.34	239.00	101.50	0.00	Weight verified with pressurized mud scales.
Event	16	Shutdown	Shutdown	11/10/2018	04:39:20	COM4	0.10	7.00	172.60	0.00	
Event	17	Drop Top Plug	Drop Top Plug	11/10/2018	04:40:45	COM4	0.11	-5.00	172.60	0.00	Dropped by HES supervisor, witnessed by company man.
Event	18	Pump Displacement	Pump Displacement	11/10/2018	04:40:51	COM4	0.11	-5.00	0.00	0.00	Pumped 121bbls of fresh water at 8bpm
Event	19	Bump Plug	Bump Plug	11/10/2018	05:07:29	COM4	7.74	923.00	125.90	0.00	Slowed down to 3bpm at 110bbls away, final circulating pressure - 500psi, Bumped at 1000psi. Held for 5min casing test.
Event	20	Check Floats	Check Floats	11/10/2018	05:11:31	USER	7.73	937.00	125.90	0.00	Released pressure and got 0.5bbls back. Floats held.
Event	21	End Job	End Job	11/10/2018	05:13:00	COM4	7.71	4.00	125.90	0.00	Got 50bbls cement to

8											surface.
Event	22	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	11/10/2018	05:15:00	USER	7.71	131.00	126.80	0.00	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	23	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/10/2018	06:15:00	USER					All HSE present and fit to drive. Aware of directions and hazards.
Event	24	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	11/10/2018	06:30:00	USER					Pre journey management prior to departure.

3.0 Attachments

3.1 Duck Club 12W-20-3N-Custom Results.png

