

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS-EBUS**

Date: Thursday, November 15, 2018

**Duck Club 12W-20-11N Surface**

Job Date: Sunday, November 04, 2018

Sincerely,  
**Tyler Hill**

## Legal Notice

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### Disclaimer:

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Table of Contents

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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..... 10

3.1 Duck Club 12W-20-11N Surface.png.....10

## 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 **Duck Club 12W-20-11N** 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.

**Approximately 22 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 Ft. Lupton *The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3894488		Quote #:		Sales Order #: 0905257725					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Chad Kelly							
Well Name: DUCK CLUB			Well #: 12W-20-11N			API/UWI #: 05-001-10156-00					
Field: WATTENBERG		City (SAP): BARR LAKE		County/Parish: ADAMS		State: COLORADO					
Legal Description: NW SW-12-1S-66W-2324FSL-682FWL											
Contractor:				Rig/Platform Name/Num: Cartel 88							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Prince Perez							
Job											
Formation Depth (MD)		Top	0'	Bottom		1,635'					
				BHST							
Job depth MD		1,633.6'		Job Depth TVD		1,633.6'					
				Wk Ht Above Floor		5'					
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	1634	0	1634	
Open Hole Section			13.5				0	1635	0	1635	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625	1		1,634		Top Plug	9.625	1	HES		
Float Collar	9.625	1		1,590.8		Plug Container	9.625	1	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	Spacer	Red Dye Spacer			10	bbl	8.34			4	420

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	Cement	SWIFTCEM (TM) SYSTEM	600	sack	13.5	1.74	9.2	8	5,520
3	Displacement	Fresh Water	123	bbl	8.34				

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	Displacement	Fresh Water	123	bbl	8.34				

Cement Left In Pipe	Amount	43 ft	Reason	Shoe Joint	
Mix Water:	pH 7	Mix Water Chloride:	<300 ppm	Mix Water Temperature:	47 °F
Cement Temperature:	64 °F	Plug Displaced by:	8.34 lb/gal	Disp. Temperature:	47 °F
Plug Bumped?	Yes	Bump Pressure:	520 psi	Floats Held?	Yes
Cement Returns:	22 bbl	Returns Density:	13.5 lb/gal	Returns Temperature:	## °F

**Comment**

Pumped 10 bbls fresh water.

Pumped 10 bbls Red Dye.

Pumped 186 bbls of SwiftCem.

Pumped 122.97 bbls of fresh water displacement.

22 bbls of cement back.

1 bbl back on the floats.

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Comments
Event	1	Call Out	Call Out	11/4/2018	01:30:00	USER				CREW CALLED OUT AT 1:30, REQUESTED ON LOCATION 5:30. CREW PICKED UP CEMENT, 100 LBS OF SUGAR, AND 2 LBS RED DYE FROM FT. LUPTON, CO. BULK 660, 10784082, 11527037, AND ELITE 3 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2018	04:50:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	11/4/2018	05:00:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/4/2018	05:30:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,633.6', 13.5" HOLE 1,635' SHOE 42.8', FRESHWATER DISPLACEMENT, HALLIBURTON TOP PLUG. CASING LANDED @ 08:30 11/4/2018.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	11/4/2018	05:40:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/4/2018	05:50:00	USER				RIG UP BULK AND MIXING

EQUIPMENT.									
Event	7	Rig-Up Completed	Rig-Up Completed	11/4/2018	07:00:00	USER			
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/4/2018	08:30:00	USER	8.14	0.00	18.00
MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.									
Event	9	Start Job	Start Job	11/4/2018	08:33:21	COM4	8.08	0.00	16.00
BEGIN RECORDING JOB DATA.									
Event	10	Test Lines	Test Lines	11/4/2018	08:36:03	COM4	8.18	0.00	60.00
PRESSURE TESTED IRON TO 2,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,100 PSI, 5TH GEAR STALL OUT @ 1,820 PSI, 2,500 KICKOUT @ 2,380 PSI.									
Event	11	Pump Spacer 1	Pump Spacer 1	11/4/2018	08:42:00	COM4	6.90	0.00	20.00
PUMP 10 BBLS OF FRESH WATER.									
Event	12	Pump Spacer 2	Pump Spacer 2	11/4/2018	08:44:13	COM4	8.19	6.80	236.00
PUMP 10 BBLS OF FRESH WATER WITH RED DYE.									
Event	13	Pump Cement	Pump Cement	11/4/2018	08:45:45	COM4	8.14	6.80	206.00
PUMP 600 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SK, 185.94 BBLS, 40.51 BBLS CALCULATED TO RETURN. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.									
Event	14	Check Weight	Check Weight	11/4/2018	08:57:32	COM4	13.49	6.80	243.00
CHECKED CEMENT WEIGHT WITH PRESSURIZED SCALES.									
Event	15	Shutdown	Shutdown	11/4/2018	09:13:16	COM4	3.63	0.00	121.00
SHUTDOWN TO DROP TOP PLUG.									
Event	16	Drop Top Plug	Drop Top Plug	11/4/2018	09:15:48	COM4	0.11	0.00	35.00
PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.									
Event	17	Pump Displacement	Pump Displacement	11/4/2018	09:15:52	COM4	0.11	0.00	35.00
BEGIN CALCULATED									

										DISPLACEMENT OF 122.97 BBLs WITH FRESH WATER.
Event	18	Bump Plug	Bump Plug	11/4/2018	09:42:06	COM4	8.35	0.00	700.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1,000 PSI.
Event	19	5 Min Shut-in Pres	5 Min Shut-in Pres	11/4/2018	09:43:31	USER	8.36	0.00	1078.00	
Event	20	Check Floats	Check Floats	11/4/2018	09:47:08	USER	8.37	0.00	446.00	RELEASED PRESSURE, FLOATS HELD, 1 BBL BACK.
Event	21	End Job	End Job	11/4/2018	09:49:21	COM4	8.34	0.00	39.00	STOP RECORDING JOB DATA.
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	11/4/2018	11:30:00	USER				DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	23	Rig-Down Equipment	Rig-Down Equipment	11/4/2018	11:40:00	USER				RIG DOWN BULK AND MIXING EQUIPMENT.
Event	24	Rig-Down Completed	Rig-Down Completed	11/4/2018	12:40:00	USER				
Event	25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2018	12:50:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	26	Crew Leave Location	Crew Leave Location	11/4/2018	13:00:00	USER				THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

3.1 Duck Club 12W-20-11N Surface.png

