

# HALLIBURTON

iCem<sup>®</sup> Service

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

Date: Friday, November 16, 2018

### **Duck Club 12W-20-10N Surface**

Job Date: Monday, November 05, 2018

Sincerely,  
**Tyler Hill**

## Legal Notice

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### Disclaimer:

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## 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-20-10N** 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 100 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 #: 3894514	Quote #:	Sales Order #: 0905257986
Customer: EXTRACTION OIL & GAS -		Customer Rep: Chad Kelly	
Well Name: DUCK CLUB		Well #: 12W-20-10N	API/UWI #: 05-001-10163-00
Field: WATTENBERG	City (SAP): BARR LAKE	County/Parish: ADAMS	State: COLORADO
Legal Description: NW SW-12-1S-66W-2352FSL-683FWL			
Contractor:		Rig/Platform Name/Num: Cartel 88	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Prince Perez	

**Job**

<b>Formation Depth (MD)</b>	<b>Top</b>	0	<b>Bottom</b>	1,636'
<b>Job depth MD</b>	1,634.6'		<b>Job Depth TVD</b>	1,634.6'
			<b>Wk Ht Above Floor</b>	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	1635	0	1635
Open Hole Section			13.5				0	1636	0	1636

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625	1		1,634.6	Top Plug	9.625	1	HES
Float Collar	9.625	1		1,591.8	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				

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	7	5,520

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	Reason	Shoe Joint
Mix Water: pH 7	43 ft	Mix Water Chloride: <300 ppm	Mix Water Temperature: 55 °F
Cement Temperature: ## °F	Plug Displaced by: 8.34 lb/gal	Bump Pressure: 693 psi	Disp. Temperature: 55 °F
Plug Bumped? Yes	Returns Density: ## lb/gal	Returns Temperature: ## °F	Floats Held? Yes

**Comment**

Pumped 10 bbls of fresh water.

Pumped 10 bbls of Red Dye.

Pumped 185.94 bbls of SwiftCem.

Pumped 123.05 bbls of displacement.

100 bbls back of cement.

.5 bbls 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 <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	11/4/2018	18:00:00	USER				CREW CALLED OUT AT 18:00, REQUESTED ON LOCATION 22:00. 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	20:30:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Crew Leave Shop	Crew Leave Shop	11/4/2018	20:40:00	USER				STARTED JOURNEY MANAGEMENT.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	11/4/2018	21:10:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,634.6', 13.5" HOLE 1,636' SHOE 42.8', FRESHWATER DISPLACEMENT, HALLIBURTON TOP PLUG. CASING LANDED @ 23:00 11/4/18.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	11/4/2018	21:20:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/4/2018	21:30:00	USER				RIG UP BULK AND MIXING

										EQUIPMENT.
Event	7	Rig-Up Completed	Rig-Up Completed	11/4/2018	22:50:00	USER	0.00	0.00	-49.00	
Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/5/2018	00:00:00	USER	8.33	0.00	6.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	11/5/2018	00:21:39	USER	0.16	0.00	7.00	BEGIN RECORDING JOB DATA.
Event	10	Test Lines	Test Lines	11/5/2018	00:28:58	COM4	8.42	0.00	2969.00	PRESSURE TESTED IRON TO 2,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 350 PSI, 5TH GEAR STALL OUT @ 1,950 PSI, 2,500 KICKOUT @ 3,000 PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	11/5/2018	00:32:52	COM4	8.37	0.00	9.00	PUMP 10 BBLS OF FRESH WATER.
Event	12	Pump Spacer 2	Pump Spacer 2	11/5/2018	00:38:12	COM4	8.33	2.00	40.00	PUMP 10 BBLS OF FRESH WATER WITH RED DYE.
Event	13	Pump Cement	Pump Cement	11/5/2018	00:40:56	COM4	8.32	4.00	91.00	PUMP 600 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SK, 185.94 BBLS, 40.42 BBLS CALCULATED TO RETURN. DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	14	Shutdown	Shutdown	11/5/2018	01:21:49	COM4	14.27	0.00	56.00	SHUTDOWN TO DROP TOP PLUG.
Event	15	Drop Top Plug	Drop Top Plug	11/5/2018	01:23:50	COM4	14.42	0.00	33.00	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	16	Pump Displacement	Pump Displacement	11/5/2018	01:23:52	COM4	14.43	0.00	33.00	BEGIN CALCULATED DISPLACEMENT OF 123 BBLS WITH FRESH WATER.

Event	17	Bump Plug	Bump Plug	11/5/2018	02:10:24	COM4	8.07	3.00	693.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 500 PSI OVER BUMP TO 1,100 PSI.
Event	18	5 Min Shut-in Pres	5 Min Shut-in Pres	11/5/2018	02:11:10	USER	8.08	0.00	1188.00	PRESSURE HELD.
Event	19	Check Floats	Check Floats	11/5/2018	02:16:25	USER	8.05	0.00	184.00	RELEASED PRESSURE, FLOATS HELD, .5 BBLs BACK.
Event	20	End Job	End Job	11/5/2018	02:18:08	USER	8.06	0.00	19.00	STOP RECORDING JOB DATA.
Event	21	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	11/5/2018	02:20:00	USER	8.06	0.00	18.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	22	Rig-Down Equipment	Rig-Down Equipment	11/5/2018	02:30:00	USER				RIG DOWN BULK AND MIXING EQUIPMENT.
Event	23	Rig-Down Completed	Rig-Down Completed	11/5/2018	03:10:00	USER				
Event	24	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/5/2018	03:20:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	25	Crew Leave Location	Crew Leave Location	11/5/2018	03:30:00	USER				THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.

3.0 Attachments

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

