

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

Date: Saturday, November 24, 2018

Duck Club 12W-20-8C Surface

Job Date: Tuesday, November 06, 2018

Sincerely,

Bryce Hinsch

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 **Duck Club 12W-20-8C** 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 70 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 #: 3894509	Quote #:	Sales Order #: 0905257726
Customer: EXTRACTION OIL & GAS -		Customer Rep: CHAD KELLY	
Well Name: DUCK CLUB	Well #: 12W-20-8C	API/UWI #: 05-001-10166-00	
Field: WATTENBERG	City (SAP): BARR LAKE	County/Parish: ADAMS	State: COLORADO
Legal Description: NW SW-12-1S-66W-2408FSL-686FWL			
Contractor:		Rig/Platform Name/Num: Cartel 88	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srcv Supervisor: James Leist	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1614ft	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	1614	0	1614
Open Hole Section			13.5				0	1619	0	1619

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			1653	Top Plug	9.625	1	HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625				SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625		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			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	SwiftCem	SWIFTCEM (TM) SYSTEM	600	sack	13.5	1.74		7.5	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	121.4	bbl	8.33					
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:		0 ppm		Mix Water Temperature:		52°F °C	
Cement Temperature:		## °F °C	Plug Displaced by:		8.33 lb/gal kg/m3		Disp. Temperature:		## °F °C	
Plug Bumped?		Yes	Bump Pressure:		520 psi MPa		Floats Held?		Yes	
Cement Returns:		70 bbl m3	Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C	
Comment										

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>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	11/6/2018	05:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/6/2018	08:00:00	USER					JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA
Event	3	Crew Leave Yard	Crew Leave Yard	11/6/2018	08:30:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	11/6/2018	09:00:00	USER					JOURNEY MANAGEMENT CLOSED OUT. RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/6/2018	09:10:00	USER					
Event	6	Other	Other	11/6/2018	09:35:00	USER					WATER TEST: PH-7, CL-0, TEMP-52 WELL INFO: 9 5/8 36# J-55 CASING SET @ 1614.58, TD-1616, S.J.- 44.26, HOLE-13.5, MUD#-9.0
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/6/2018	09:45:00	USER					JSA COMPLETE
Event	8	Other	Other	11/6/2018	09:45:00	USER					MUD SCALES CHECKED WITH WATER PRIOR TO JOB.
Event	9	Rig-Up Equipment	Rig-Up Equipment	11/6/2018	09:50:00	USER					RIGGED UP TO 1 UPRIGHT WATER TANK, 2 660 BULK TRUCKS AND 1 RED TIGER
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/6/2018	10:18:19	USER	0.27	0.00	0.00	0.00	JSA COMPLETE
Event	11	Start Job	Start Job	11/6/2018	10:33:00	COM5	8.43	0.00	0.00	0.00	

Event	12	Test Lines	Test Lines	11/6/2018	10:38:42	USER	8.54	0.00	3147.00	2.10	3152 PSI
Event	13	Pump Spacer 1	Pump Spacer 1	11/6/2018	10:40:46	USER	8.44	0.00	3.00	2.10	FRESH WATER LAST 10 BBLS WAS WITH RED DYE
Event	14	Pump Cement	Pump Cement	11/6/2018	10:51:11	USER	13.69	5.60	167.00	2.30	600 SKS SWIFTCEM, 13.5 PPG, 1.74 FT3/SK, 9.2 GAL/SK
Event	15	Shutdown	Shutdown	11/6/2018	11:19:09	USER	14.16	0.00	36.00	205.60	TO WASH UP ON TOP OF PLUG AND DROP TOP PLUG
Event	16	Drop Top Plug	Drop Top Plug	11/6/2018	11:21:39	USER	17.72	0.00	4.00	205.60	AWAY, USING POSITIVE DISPLACEMENT MANIFOLD
Event	17	Pump Displacement	Pump Displacement	11/6/2018	11:22:12	USER	10.70	1.10	11.00	0.20	FRESH WATER
Event	18	Slow Rate	Slow Rate	11/6/2018	11:41:04	USER	8.18	2.00	478.00	117.90	TO BUMP PLUG
Event	19	Bump Plug	Bump Plug	11/6/2018	11:46:36	USER	8.22	0.00	1050.00	128.00	PLUG BUMPED ON CALCULATED
Event	20	Check Floats	Check Floats	11/6/2018	11:51:09	USER	8.18	0.00	22.00	128.00	FLOATS HELD 0.5 BBL BACK TO TRUCK
Event	21	End Job	End Job	11/6/2018	11:52:00	USER	8.19	0.00	3.00	128.00	GOOD CIRCULATION THROUGHOUT JOB, NO PIPE MOVEMENT 70 BBLS OF CMT TO SURFACE
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	11/6/2018	12:04:33	USER					
Event	23	Crew Leave Location	Crew Leave Location	11/6/2018	13:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW.

3.0 Attachments

3.1 Extraction Duck Club 12W-20-8C Surface Job Chart

