

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

For: Manny

Date: Saturday, December 29, 2018

Duck Club

Extraction 901 Duck Club 12W-20-2N

Job Date: Saturday, December 29, 2018

Sincerely,

Kamereon White & Crew

Legal Notice

Disclaimer:

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The Road to Excellence Starts with Safety

Sold To #: 369404		Ship To #: 3894418		Quote #:		Sales Order #: 0905371044				
Customer: EXTRACTION OIL & GAS-EBUS				Customer Rep: Manny						
Well Name: DUCK CLUB			Well #: 12W-20-2N		API/UWI #: 05-001-10162-00					
Field: WATTENBERG		City (SAP): BARR LAKE		County/Parish: ADAMS		State: COLORADO				
Legal Description: NW SW-12-1S-66W-2575FSL-694FWL										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 901						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Kamereon White						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		17799 ft		Job Depth TVD		7238				
Water Depth				Wk Ht Above Floor		5'				
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	1631		0
Casing		5.5	4.778	20			0	17799	0	0
Open Hole Section			8.5				1631	17807	0	0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5	1		17799		Top Plug	5.5	1	KLX	
Float Shoe	5.5					Bottom Plug	5.5	1	KLX	
Float Collar	5.5	1		17794						
						Plug Container	5.5	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	12.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	12.5	2.67		7		

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	ElastiCem	ELASTICEM (TM) SYSTEM	585	sack	13.2	1.57		8	7.66
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	GasStop	ELASTICEM (TM) SYSTEM	615	sack	13.2	1.56		6	7.61
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	ElastiCem	ELASTICEM (TM) SYSTEM	1618	sack	13.2	1.57		8	7.66
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
5	MMCR Displacement	MMCR Displacement	20	bbl	8.33			8	
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
6	Displacement	Displacement	375	bbl	8.33			8	
Cement Left In Pipe		Amount	ft		Reason			Shoe Joint	

Mix Water:	pH 7	Mix Water Chloride:	< 600 ppm	Mix Water Temperature:	74 °F
		Plug Displaced by:	8.33 lb/gal		
Plug Bumped?	Yes	Bump Pressure:	3100 psi	Floats Held?	Yes
Cement Returns:	49 bbl	Returns Density:	13.2 lb/gal		
Comment					

1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Recirc Density (ppg)	Comments
Event	1	Assessment Of Location Safety Meeting	Call Out	12/28/2018	11:00:00	USER					Crew called out and was requested to be on location @ 1700.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/28/2018	14:50:00	USER					Crew discussed the route of travel and supervisor called in a journey.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	12/28/2018	15:00:00	USER					Crew left the yard.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/28/2018	15:30:00	USER					Crew arrived on location early and the rig was running casing.
Event	5	Assessment Of Location Safety Meeting	Safety Meeting - Assessment of Location	12/28/2018	15:40:00	USER					Spotting in trucks and supervisor met with the customer and got the well information. TD-17,807' TP-17,799' SJ-5' FC-17794' Cas-5.5" 20# P110 PC-9.625" 36# Set @ 1631' Mud Weight-9.2 ppg OBM, Wet Shoe- 5 Bbls TVD-7238' OH-8.5."
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/28/2018	16:30:00	USER					Discussed rig up procedure and signed the JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	12/28/2018	16:40:00	USER					Rigged up all HES equipment and lines.
Event	8	Rig-Up Completed	Rig-Up Completed	12/28/2018	18:15:00	USER					All HES equipment and lines rigged up safely.
Event	9	Casing on Bottom	Casing on Bottom	12/28/2018	23:00:00	USER	5.00	0.00	622.90	0.00	Casing on Bottom with the landing joint.

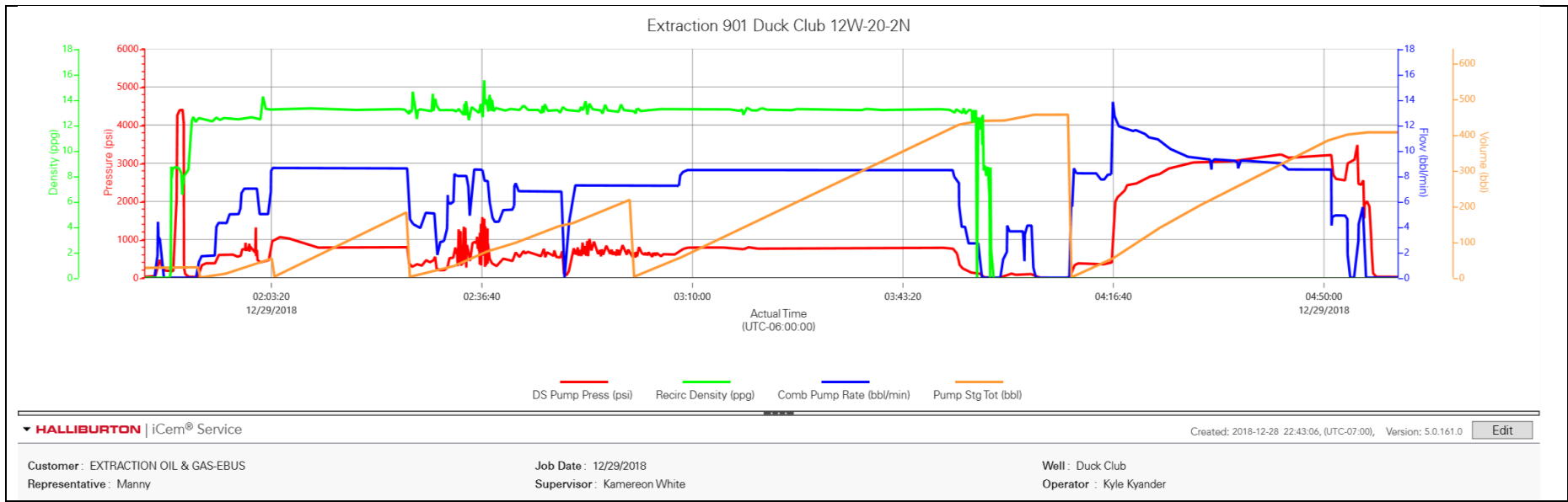
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/29/2018	00:15:00	USER	6.00	0.00	622.90	-0.01	Discussed the job procedure and pressures with all personnel involved with the cement job.
Event	11	Drop Bottom Plug	Drop Bottom Plug	12/29/2018	01:44:08	COM4	29.00	0.00	27.20	-0.01	Customer and Halliburton Rep witnessed the plug being loaded into the pup joint and being in there before the plug container was rigged up onto the casing.
Event	12	Other	Other	12/29/2018	01:44:45	COM4	22.00	0.00	27.20	0.00	Fill lines with 3 bbls of water 3 bpm 460 psi
Event	13	Test Lines	Test Lines	12/29/2018	01:48:31	COM4	4342.00	0.00	29.30	8.70	Tested lines to 500 psi to test the EKO's they worked so we performed a 4500 psi test and held for 1 min no leaks.
Event	14	Pump Spacer 1	Pump Spacer 1	12/29/2018	01:51:42	COM4	12.00	0.00	0.00	12.62	Pumped 50 bbls of tuned spacer III @ 12.5 ppg 2.67 yield 16.1 gal/sk 7 bpm 670 psi. With Musol A and Dual B added throughout.
Event	15	Check Weight	Check Weight	12/29/2018	01:52:22	COM4	341.00	1.70	1.00	12.52	Checked the weight of the spacer with the pressurized mud scales scaled @ 12.4 ppg.
Event	16	Pump Lead Cement	Pump 1st Lead Cement	12/29/2018	02:03:27	COM4	910.00	8.60	54.10	13.21	Pumped 164 bbls of 1st Lead @ 13.2 ppg 1.57 yield 7.66 gal/sk (585 sks) 8.6 bpm 1098 Psi.
Event	17	Check Weight	Check Weight	12/29/2018	02:10:00	COM4	829.00	8.60	56.30	13.22	Checked the weight of the 1st Lead Cement with the pressurized mud scales scaled @ 13.2 ppg.
Event	18	Pump Lead Cement	Pump Lead Cement	12/29/2018	02:24:52	COM4	804.00	8.60	0.10	12.97	Pumped 171 bbls of Latex Lead Cement @ 13.2 ppg

											1.56 yield 7.61 gal/sk (615 sks) 6 bpm 841 psi.
Event	19	Check Weight	Check Weight	12/29/2018	02:35:32	COM4	915.00	8.50	57.50	13.33	Checked the weight of the Latex lead cement with the pressurized mud scales scaled @ 13.2 ppg.
Event	20	Pump Tail Cement	Pump Tail Cement	12/29/2018	03:00:22	COM4	681.00	7.30	219.80	13.07	Pumped 453 bbls of Tail Cement @ 13.2 ppg 1.57 yield 7.66 gal/sk (1618 sks) 8 bpm 800 psi.
Event	21	Check Weight	Check Weight	12/29/2018	03:01:50	COM4	578.00	7.20	10.60	13.07	Checked the weight of the Tail cement with the pressurized mud scales scaled @ 13.2 ppg.
Event	22	Shutdown	Shutdown	12/29/2018	03:55:37	COM4	106.00	0.00	438.80	12.44	Shutdown to send air back from the rig floor to the wash up Tank.
Event	23	Clean Lines	Clean Lines	12/29/2018	04:01:57	COM4	89.00	3.60	447.90	-0.08	Cleaned the pumps and lines.
Event	24	Drop Top Plug	Drop Top Plug	12/29/2018	04:09:33	COM4	-3.00	0.00	455.70	-0.08	Customer, KLX and Halliburton reps all witnessed the top plug being loaded and pushed below the pin.
Event	25	Pump Displacement	Pump Displacement	12/29/2018	04:09:37	COM4	-3.00	0.00	455.70	-0.08	Pumped 395 bbls of displacement with the first 20 bbls with MMCR
Event	26	Displ Reached Cement	Displ Reached Cement	12/29/2018	04:16:42	COM4	1218.00	12.80	55.40	-0.08	@ 60 bbls away we caught the plug
Event	27	Bump Plug	Bump Plug	12/29/2018	04:52:00	COM4	2574.00	4.90	392.30	-0.08	Bumped the plug, the final circulating psi was 2680 psi and took 500 psi over to 3100 psi and shutdown.
Event	28	Other	Other	12/29/2018	04:53:00	COM4	2549.00	4.90	397.10	-0.08	Pressured up @ 3100 psi @ 2 bpm to rupture the disk,

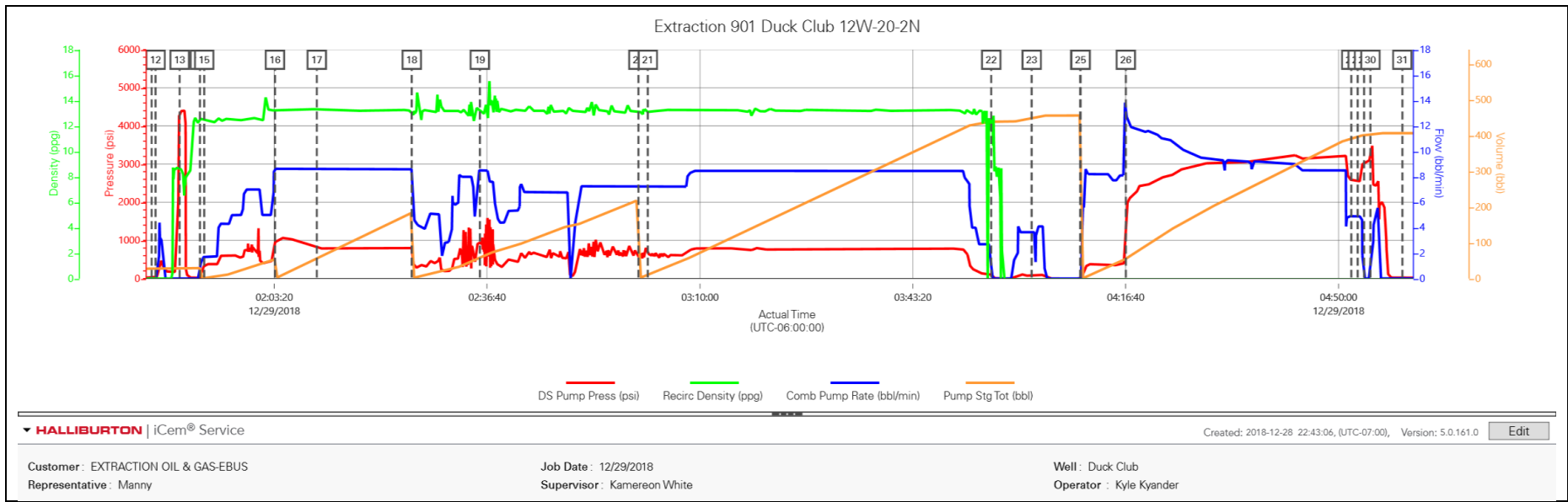
											the disk ruptured @ 3550 psi. pumped a 5 bbl wet shoe.
Event	29	Other	Other	12/29/2018	04:54:00	USER	3038.00	0.00	400.70	-0.08	Checked the floats and the floats held we got 3 bbls back
Event	30	End Job	End Job	12/29/2018	04:55:00	USER	3118.00	1.10	400.70	-0.08	Cement job complete, we got 50 bbls of spacer back and 49 bbls of 1 st lead back.
Event	31	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	12/29/2018	05:00:00	USER	8.00	0.00	406.30	-0.08	Discussed the potential hazards, signed the JSA.
Event	32	Rig Down Lines	Rig Down Lines	12/29/2018	05:10:00	USER	6.00	0.00	406.30	-0.08	Rig down all HES equipment and lines.
Event	33	Rig-Down Completed	Rig-Down Completed	12/29/2018	06:30:00	USER					All HES equipment and lines rigged down safely.
Event	34	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/29/2018	07:30:00	USER					Kamereon White and Crew would like to thank you for your business and choosing Halliburton Cement, Please give us a call if you have any other questions or concerns.

2.0 Attachments

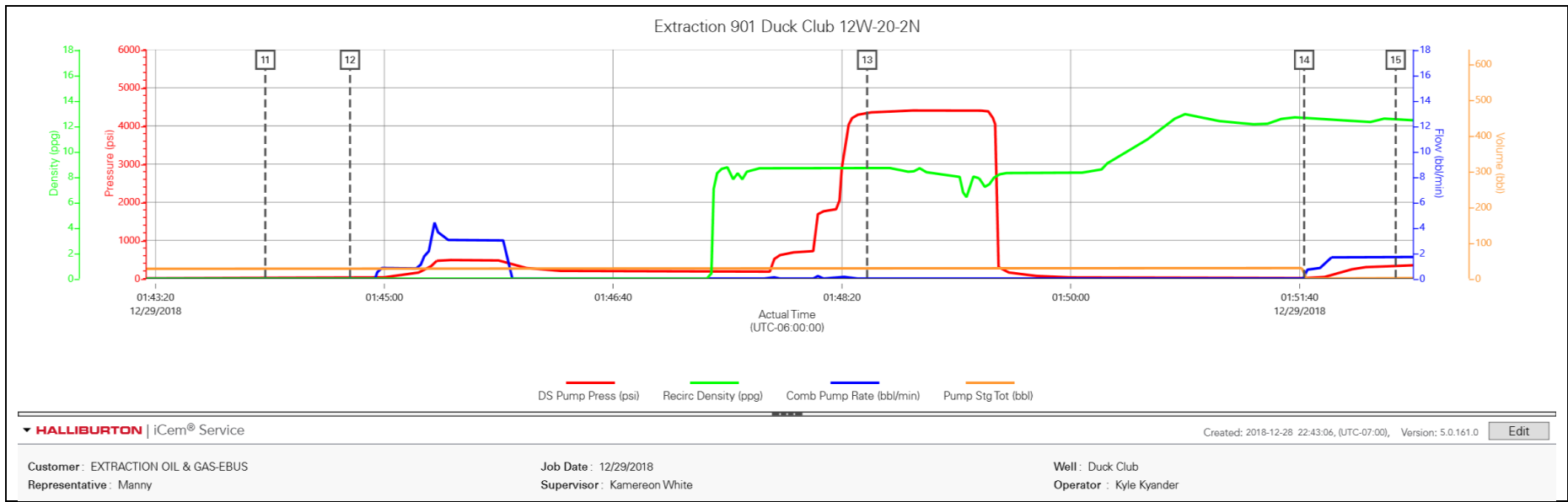
2.1 cement job with out events..png



2.2 cement job with events .png



2.3 Pre Job Pressure test .png



2.4 Rupture the disk and pumped a 5 bbl w.s checked the floats .png

