

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Monday, January 29, 2018

Cox 5 Surface

Job Date: Friday, January 12, 2018

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Cox 5 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 30 barrels 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 369404	Ship To #: 3681218	Quote #:	Sales Order #: 0904565407
Customer: EXTRACTION OIL & GAS -		Customer Rep: Shawn Macentire	
Well Name: COX	Well #: 5	API/UWI #: 05-123-41935-00	
Field: WILDCAT	City (SAP): KEOTA	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-22-12N-84W-882FNL-2233FWL			
Contractor: Cartell 44		Rig/Platform Name/Num: Cartell 44	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		Srvc Supervisor: Nicholas Peterson	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	1,730'	Job Depth TVD	1,730'
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	0	9.625	8.921	36	8 RD	J-55	0	1730	0	0
Open Hole Section			13.5				0	1730	0	0

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625	1	DL	1,730		Top Plug	9.625	1	HES
Float Shoe	9.625	1	DL	1,688		Bottom Plug			
Float Collar						SSR plug set			
Insert Float						Plug Container	9.625	1	HES
Stage Tool						Centralizers			

Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Water Spacer	Fresh Water Spacer	20	bbl	8.33		42	4	840	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	Red Dye Spacer	Red Dye Spacer	10	bbl	8.33		42	4	420	

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Cementing Job Summary

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	SwiftCem	SWIFTCEM (TM) SYSTEM	600	sack	13.5	1.74	9.2	8	5,520
9.20 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Fresh Water	Fresh Water	130	bbl	8.33			8	5,460
Cement Left In Pipe	Amount	42 ft			Reason			Shoe Joint	
Mix Water:	pH 7.0	Mix Water Chloride:	0 ppm		Mix Water Temperature:			83 °F	
Cement Temperature:	## °F	Plug Displaced by:	8.33 lb/gal		Disp. Temperature:			## °F	
Plug Bumped?	Yes	Bump Pressure:	630 psi		Floats Held?			Yes	
Cement Returns:	30 bbl	Returns Density:	13.5 lb/gal		Returns Temperature:			## °F	
Comment: Pumped 20 bbls Fresh water, 10 bbls Dye, 185.94 bbls Cement, 130 bbls Fresh water displacement. Cement returns to surface @ 100 bbls away. 30 bbls of cement to surface.									

2.0 Real-Time Job Summary

2.1 Job Event Log

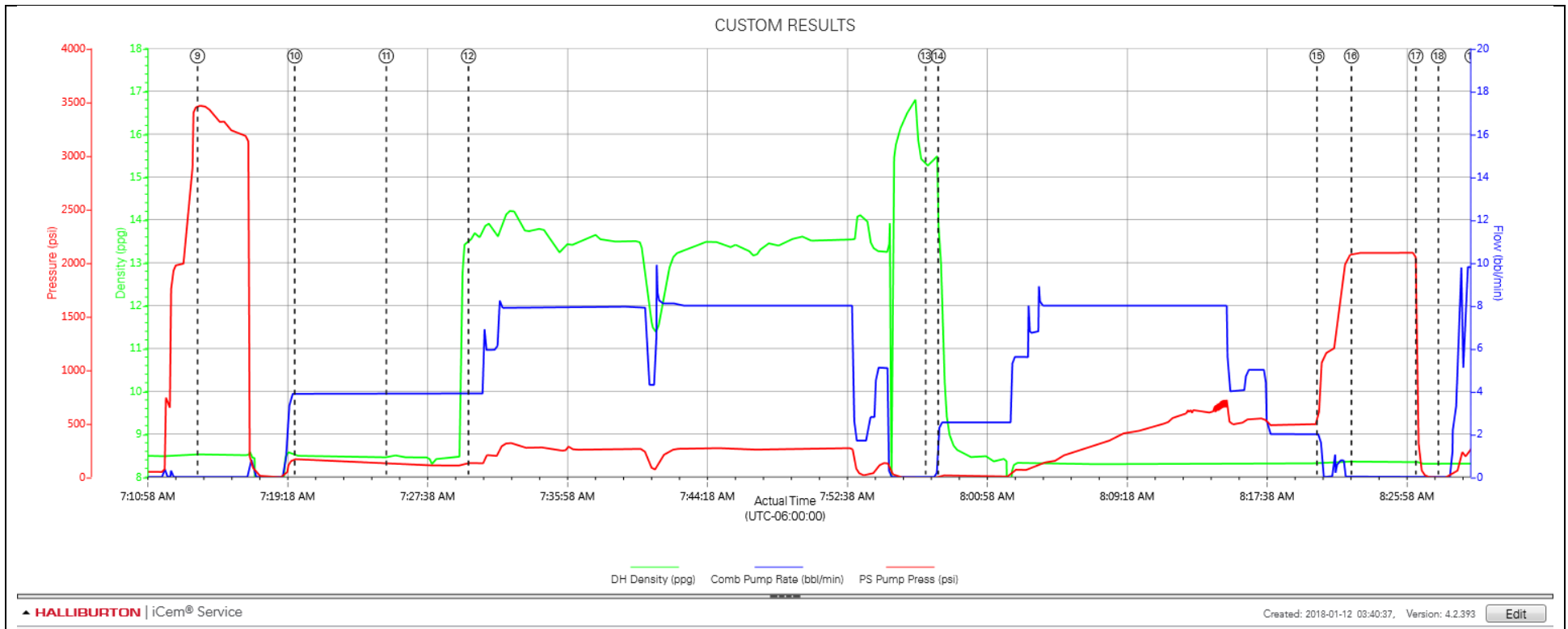
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Call Out	Call Out	1/11/2018	21:00:00	USER				CREW CALLED OUT AT 21:00, REQUESTED ON LOCATION 03:00. CREW PICKED UP CEMENT, 100 LBS OF SUGAR, AND 2 LBS RED DYE FROM FT. LUPTON, CO. BULK 660, 10866493, 11887096, AND PUMP 11189145.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/11/2018	23:00:00	USER				DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.
Event	3	Arrive At Loc	Arrive At Loc	1/12/2018	02:00:00	USER				END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; CASING- 9.625 36# @ 1,730', 13.5" HOLE 1,730', SHOE 42', FRESH WATER DISPLACEMENT, 1 HALLIBURTON TOP PLUG. CASING LANDED @ 06:30 01/12/2018.
Event	4	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	1/12/2018	04:15:00	USER				HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	5	Rig-Up Equipment	Rig-Up Equipment	1/12/2018	04:30:00	USER				CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	6	Rig-Up Completed	Rig-Up Completed	1/12/2018	05:00:00	USER				WAITED ON RIG TO FINISH RUNNING CASING.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/12/2018	06:45:00	USER	0.36	0.00	1.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	8	Start Job	Start Job	1/12/2018	07:09:12	COM5	8.41	0.00	0.00	MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Test Lines	Test Lines	1/12/2018	07:14:04	COM5	8.53	0.00	3466.00	PRESSURE TESTED IRON TO 3500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 720 PSI, 5TH GEAR STALL OUT @ 1,993 PSI.
Event	10	Pump Spacer 1	Pump Spacer 1	1/12/2018	07:19:52	COM5	8.50	3.90	168.00	PUMP 20 BBLs OF FRESH WATER. PUMP RATE 4 BBLs/MIIN.
Event	11	Pump Spacer 2	Pump Spacer 2	1/12/2018	07:25:19	COM5	8.46	3.90	127.00	PUMP 10 BBLs OF FRESH WATER WITH RED DYE. PUMP

RATE 4 BBLS/MIN.

Event	12	Pump Cement	Pump Cement	1/12/2018	07:30:13	COM5	13.53	3.90	130.00	PUMP 600 SKS OF SWIFTCEM @ 13.5 LB/GAL, 1.74 FT3/SK, 9.2 GAL/SK 185.94 BBLS. HOL 1,730' TOL CALCULATED @ SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PRESSURE 370 @ 8 BBLS/MIN.
Event	13	Drop Top Plug	Drop Top Plug	1/12/2018	07:57:27	COM5	15.25	0.00	-8.00	PLUG LEFT CONTAINER, VERIFIED BY COMPANY REP.
Event	14	Pump Displacement	Pump Displacement	1/12/2018	07:58:11	COM5	13.13	2.60	13.00	BEGIN CALCULATED DISPLACEMENT OF 130 BBLS OF FRESH WATER. CEMENT TO SURFACE @ 100 BBLS INTO DISPLACEMENT, 30 BBLS OF CEMENT TO SURFACE.
Event	15	Bump Plug	Bump Plug	1/12/2018	08:20:45	USER	8.33	2.00	686.00	PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 630 PSI OVER BUMP TO 1,100 PSI.
Event	16	Test Lines	Test Lines	1/12/2018	08:22:48	COM5	8.36	0.00	2088.00	CASING PRESSURE TEST @ 2,00 PSI FOR 5 MINS.
Event	17	Check Floats	Check Floats	1/12/2018	08:26:39	USER	8.36	0.00	450.00	RELEASED PRESSURE, FLOATS HELD, 2 BBLS BACK.
Event	18	End Job	End Job	1/12/2018	08:28:00	COM5	8.31	0.00	-6.00	STOP RECORDING JOB DATA.
Event	19	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	1/12/2018	08:30:00	USER	8.32	9.70	325.00	DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.
Event	20	Rig-Down Equipment	Rig-Down Equipment	1/12/2018	08:40:00	USER	7.42	2.30	12.00	ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.
Event	21	Rig-Down Completed	Rig-Down Completed	1/12/2018	09:15:00	USER				RIG DOWN BULK AND MIXING EQUIPMENT.
Event	22	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	1/12/2018	09:45:00	USER				DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.
Event	23	Crew Leave Location	Crew Leave Location	1/12/2018	10:00:00	USER				THANK YOU FOR USING HALLIBURTON – NICK PETERSON AND CREW.

3.0 Attachments

3.1 Custom Results – Job Chart with Events



3.2 Custom Results – Job Chart without Events

