

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, February 08, 2018

COYOTE TRAILS 34S-20-11C SURFACE

Job Date: Tuesday, February 06, 2018

Sincerely,

Julia Nichols

Legal Notice

Warning Disclaimer

Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

Limitations of Liability

Except as expressly set forth herein, there are no representations or warranties by Halliburton, express or implied, including implied warranties of merchantability and/or fitness for a particular purpose. In no event will Halliburton or its suppliers be liable for consequential, incidental, special, punitive or exemplary damages (including, without limitation, loss of data, profits, use of hardware, or software). Customer accepts full responsibility for any investment made based on results from the Software. Any interpretations, analyses or modeling of any data, including, but not limited to Customer data, and any recommendation or decisions based upon such interpretations, analyses or modeling are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional may differ. Accordingly, Halliburton cannot and does not warrant the accuracy, correctness or completeness of any such interpretation, recommendation, modeling or other products of the Software Product. As such, any interpretation, recommendation or modeling resulting from the Software for the purpose of any drilling, well treatment, production or financial decision will be at the sole risk of Customer. Under no circumstances will Halliburton or its suppliers be liable for any damages.

Table of Contents

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	CUSTOM RESULTS – JOB CHART WITH EVENTS	10
3.2	CUSTOM RESULTS – JOB CHART WITHOUT EVENTS	11

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **COYOTE TRAILS 34S-20-11C** 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 33 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]

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 389404		Ship To #: 3843099		Quote #:		Sales Order #: 0904611987					
Customer: EXTRACTION OIL & GAS -				Customer Rep: KALYN HOLGATE							
Well Name: COYOTE TRAILS			Well #: 34S-20-11C			API/UWI #: 05-123-45991-00					
Field: WATTENBERG		City (SAP): ERIE		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-28-1N-88W-1146FSL-2121FEL											
Contractor: Patterson 901					Rig/Platform Name/Num: Patterson 901						
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199					Srcv Supervisor: Bryce Muir						
Job											
Formation Name											
Formation Depth (MD)		Top			Bottom						
Form Type					BHST						
Job depth MD		1623ft			Job Depth TVD						
Water Depth					Wk Ht Above Floor			3 FT.			
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	1623	0	0	
Open Hole Section			13.5				0	1650	0	0	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625					Top Plug	9.625	1	HES		
Float Shoe	9.625	1	TOPCO	1623		Bottom Plug	9.625				
Float Collar	9.625	1	TOPCO	1581		SSR plug set	9.625				
Insert Float	9.625					Plug Container	9.625	1	HES		
Stage Tool	9.625					Centralizers	9.625	18	TOPCO		
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	Red Dye Spacer	Red Dye Spacer			10	bbl	8.33				
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	SwiftCem	SWIFTCEM (TM) SYSTEM			560	sack	13.5	1.74		5	9.2
9.20 Gal		FRESH WATER									

last updated on 2/8/2018 9:57:59 AM

Page 1 of 3

HALLIBURTON

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	Fresh Water	Fresh Water	122	bbl	8.33					
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint		

Comment: WE ARRIVED ON LOCATION AT 0500 HOURS ON 02/06/2018. WE SPOTTED IN OUR EQUIPMENT AND RIGGED UP OUR IRON. WE WAITED ON LOCATION UNTIL THE CASING WAS RAN. AFTER THE CASING WAS LANDED WE RIGGED UP THE PLUG CONTAINER AND LOADED THE PLUG. WE HELD A SAFETY MEETING BEFORE WE STARTED THE JOB. WE TESTED OUR IRON AND THEN PUMPED FRESH WATER TO BREAK CIRCULATION. IT TOOK 5 BBLs TO BREAK CIRCULATION. WE THEN PUMPED 10 BBLs DYED SPACER FOLLOWED BY 174 BBLs OF CEMENT. TOP PLUG WAS DROPPED BY BRYCE MUIR AND WITNESSED BY COMPANY REP. WE PUMPED 122 BBLs OF DISPLACEMENT. WE GOT 10 BBLs DYE SPACER TO SURFACE FOLLOWED BY 33 BBLs OF GOOD CEMENT. WE LANDED THE PLUG AT 122 BBLs DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 675 PSI AND PRESSURED UP TO 980 PSI. HELD FOR ONE MINUTE AND CHECKED FLOATS. FLOATS HELD AND WE GOT 1 BBL BACK TO THE RED TIGER.

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	2/6/2018	02:00:00	USER				CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	2/6/2018	03:00:00	USER				LOAD UP ALL REQUIRED MATERIALS NEEDED TO PERFORM JOB. DOWNLOAD ALL NECESSARY PAPERWORK NEEDED TO COMPLETE JOB.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/6/2018	03:45:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS TO LOCATION. IDENTIFY ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP IF NEEDED.
Event	4	Depart from Service Center or Other Site	Depart from Service Center or Other Site	2/6/2018	04:00:00	USER				
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	2/6/2018	05:00:00	USER				
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/6/2018	05:05:00	USER				ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS. DISCUSS THE BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/6/2018	05:15:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION. DISCUSSED WALKING SURFACES, LINE OF FIRES, AND PINCH POINTS.
Event	8	Rig-Up Equipment	Rig-Up Equipment	2/6/2018	05:30:00	USER				RIG UP EQUIPMENT TO RED ZONE.
Event	9	Other	Other	2/6/2018	06:00:00	USER				WAIT FOR RIG TO FINISH RUNNING CASING.
Event	10	Rig-Up Equipment	Rig-Up Equipment	2/6/2018	11:55:00	USER	48.30	8.38	0.00	PRE LOAD 9.625" TOP PLUG. PLUG LOADED BY BRYCE MUIR AND WITNESSED BY THE COMPANY MAN. RIG UP PLUG CONTAINER, MANIFOLD, AND PUMPING LINES.
Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/6/2018	12:10:00	USER	51.30	8.39	0.00	DISCUSS HES SAFETY AND JOB PROCEDURES WITH RIG CREW AND COMPANY MAN. IDENTIFY CLOSEST HOSPITAL, MUSTER AREAS, AND FIRS AID LOCATIONS. DISCUSS JOB PROCEDURES IN DETAIL. DISCUSS RATES AND QUANTITIES

OF FLUIDS TO BE PUMPED.

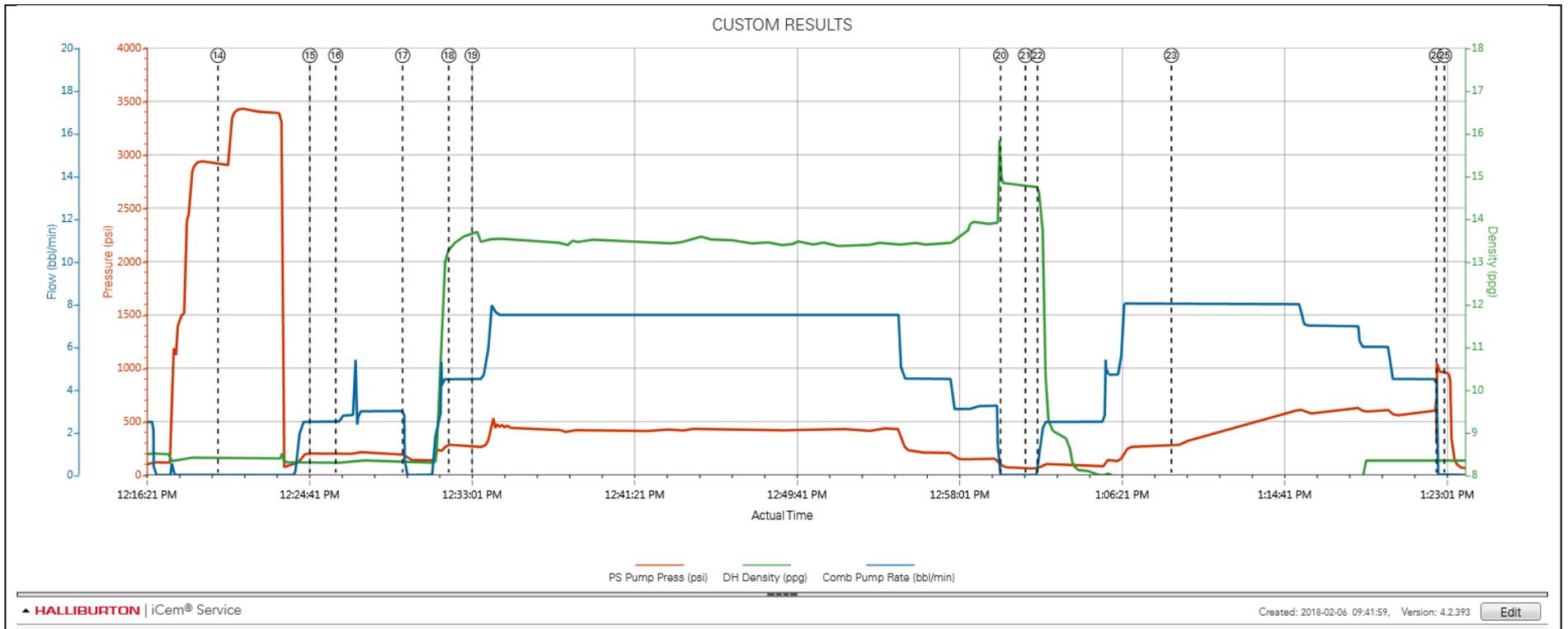
Event	12	Start Job	Start Job	2/6/2018	12:15:11	COM6	51.30	8.38	0.00	
Event	13	Other	Other	2/6/2018	12:15:30	USER	53.30	7.65	1.10	PUMP 3 BBLs OF FRESH WATER TO FILL PUMPS AND LINES.
Event	14	Test Lines	Test Lines	2/6/2018	12:20:06	COM6	2913.30	8.40	0.00	CONDUCT A LOW PRESSURE TEST TO 500 PSI TO TEST RED TIGER PRESSURE KICKOUTS. CONDUCT A HIGH PRESSURE TEST TO 3000 PSI TO TEST PUMP AND LINES.
Event	15	Pump Spacer 1	Pump Spacer 1	2/6/2018	12:24:49	COM6	201.30	8.30	2.50	PUMP FRESH WATER TO BREAK CIRCULATION. PUMPED AT 3 BPM @ 218 PSI. IT TOOK 5 BBLs TO BREAK CIRCULATION.
Event	16	Pump Spacer 2	Pump Spacer 2	2/6/2018	12:26:08	COM6	198.30	8.29	2.50	PUMPED 10 BBLs OF DYED SPACER. PUMPED AT 3 BPM @ 215 PSI.
Event	17	Shutdown	Shutdown	2/6/2018	12:29:34	COM6	177.30	8.30	0.00	MIX UP CEMENT.
Event	18	Check Weight	Check weight	2/6/2018	12:31:56	COM6	287.30	13.34	4.50	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	19	Pump Cement	Pump Cement	2/6/2018	12:33:08	COM6	272.30	13.68	4.50	PUMP 174 BBLs OF PRIMARY CEMENT. 560 SACKS @ 13.5 #/GAL 1.74 CUFT/SK 9.2 GAL/SK. WE PUMPED CEMENT AT 7 1/2 BPM @ 480 PSI. WE HAD GOOD CIRCULATION.
Event	20	Shutdown	Shutdown	2/6/2018	13:00:14	COM6	81.30	14.82	0.00	
Event	21	Drop Top Plug	Drop Top Plug	2/6/2018	13:01:30	COM6	63.30	14.76	0.00	DROP 9.625" TOP PLUG. TOP PLUG DROPPED BY BRYCE MUIR AND WITNESSED BY THE COMPANY MAN.
Event	22	Pump Displacement	Pump Displacement	2/6/2018	13:02:07	COM6	75.30	14.11	1.20	PUMP 122 BBLs OF FRESH WATER DISPLACEMENT. WE USED THE FIRST 10 BBLs TO WASH UP ON TOP OF THE PLUG. WE PUMPED DISPLACEMENT AT 8 BPM @ 350 PSI. WE MONITORED RATES AND PRESSURES THROUGHOUT DISPLACEMENT.
Event	23	Displ Reached Cmnt	Displ Reached Cmnt	2/6/2018	13:09:00	USER	275.30	7.89	8.00	TOP PLUG REACHED CEMENT AT 36 BBLs OF DISPLACEMENT PUMPED. WE GOT DYED SPACER TO SURFACE AT 79 BBLs PUMPED. AT 89 BBLs DISPLACEMENT PUMPED WE GOT CEMENT TO SURFACE. WE GOT 33 BBLs OF GOOD CEMENT TO SURFACE. SLOWED OUR RATE TO LAND THE PLUG.
Event	24	Bump Plug	Bump Plug	2/6/2018	13:22:35	COM6	972.30	8.36	0.00	WE LANDED THE PLUG AT 122 BBLs DISPLACEMENT PUMPED. PLUG WAS LANDED AT 4 1/2 BPM @ 675 PSI.

WE PRESSURED UP TO 980 PSI AND HELD FOR LESS THAN 1 MINUTE.

Event	25	Check Floats	Check Floats	2/6/2018	13:23:00	USER	956.30	8.36	0.00	FLOATS HELD. WE GOT 1 BBL BACK TO THE RED TIGER.
Event	26	End Job	End Job	2/6/2018	13:24:35	COM6	58.30	8.34	0.00	
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/6/2018	13:35:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKING IRON ON LOCATION.
Event	28	Rig-Down Equipment	Rig-Down Equipment	2/6/2018	13:50:00	USER				
Event	29	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/6/2018	14:55:00	USER				DISCUSSED HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER. DISCUSSED ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO FUEL UP IF NEEDED.
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/6/2018	15:10:00	USER				JOB WAS COMPLETED SAFELY BY BRYCE MUIR AND CREW. THANK YOU FOR USING HALLIBURTON ENERGY SERVICES. STAY SAFE OUT HERE.

3.0 Attachments

3.1 CUSTOM RESULTS – JOB CHART WITH EVENTS



3.2 CUSTOM RESULTS – JOB CHART WITHOUT EVENTS

