

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, February 08, 2018

COYOTE TRAILS 34S-20-12N SURFACE

Job Date: Monday, February 05, 2018

Sincerely,

Julia Nichols

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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-20-12N** 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]

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 389404		Ship To #: 3843192		Quote #:		Sales Order #: 0904613049					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Kalyn Holgate							
Well Name: COYOTE TRAILS			Well #: 34S-20-12N			API/UWI #: 05-123-45983-00					
Field: WATTENBERG		City (SAP): ERIE		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-28-1N-88W-1148FSL-2103FEL											
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		1626ft			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	1626	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	TOPCO	1	1626		Bottom Plug	9.625				
Float Collar	9.625	TOPCO	1	1584		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 10:10:12 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/mi n	Total Mix Fluid Gal
3	Fresh Water	Fresh Water	122	bbl	8.33				
Cement Left In Pipe		Amount	42 ft		Reason			Shoe Joint	
<p>Comment: WE ARRIVED ON LOCATION AT 1700 HOURS ON 02/05/2018. 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 650 PSI AND PRESSURED UP TO 1260 PSI. HELD FOR ONE MINUTE AND CHECKED FLOATS. FLOATS HELD AND WE GOT 1 BBL BACK TO THE RED TIGER.</p>									

2.0 Real-Time Job Summary

2.1 Job Event Log

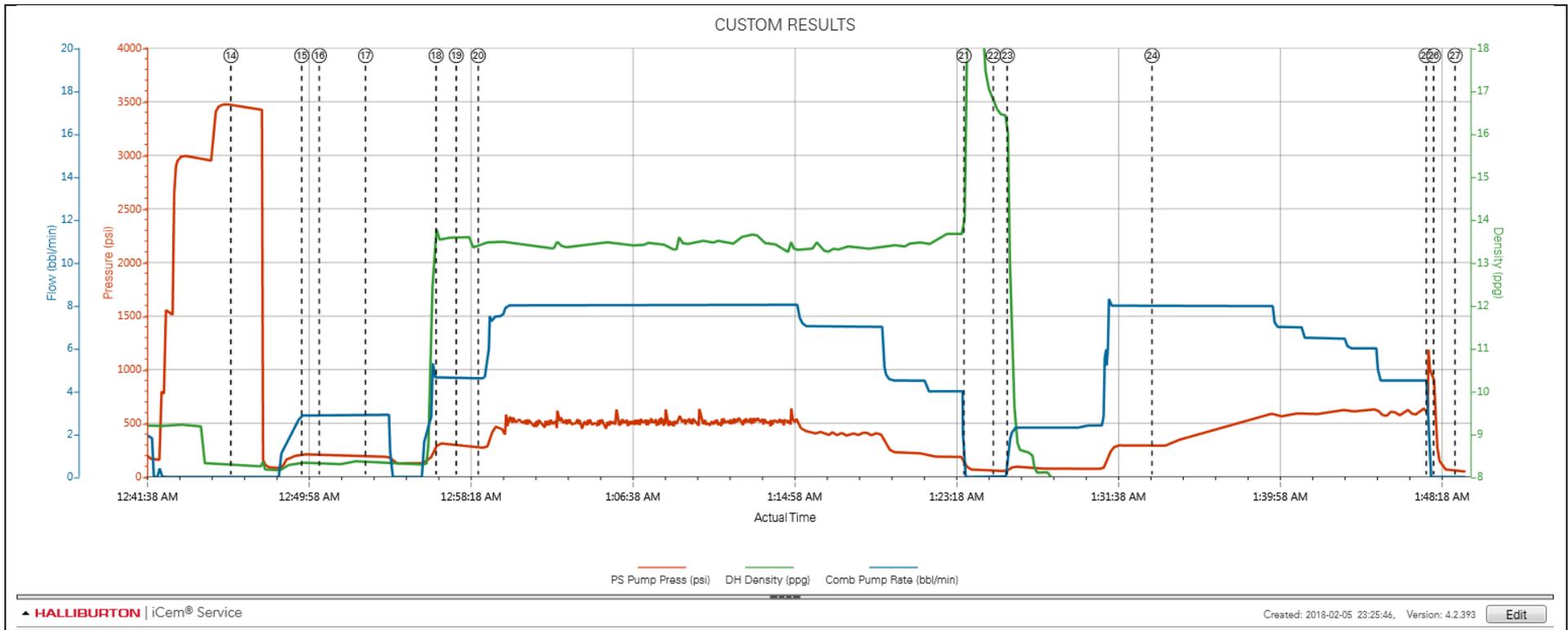
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	2/5/2018	14:00:00	USER				CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	2/5/2018	15:00:00	USER				LOAD UP ALL MATERIALS REQUIRED TO PERFORM JOB. DOWNLOAD ALL NECESSARY PAPERWORK NEEDED FOR JOB.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/5/2018	15:45:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS TO LOCATION. IDENTIFY SAFEST 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	2/5/2018	16:00:00	USER				
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	2/5/2018	17:00:00	USER				
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/5/2018	17:05:00	USER				ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS. DISCUSS BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/5/2018	17:15:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION. DISCUSSED WALKING SURFACES, LINES OF FIRES, AND POSSIBLE PINCH POINT AREAS.
Event	8	Rig-Up Equipment	Rig-Up Equipment	2/5/2018	17:30:00	USER				RIG UP TO THE RED ZONE.
Event	9	Other	Other	2/5/2018	18:00:00	USER				WAIT ON RIG TO FINISH RUNNING CASING.
Event	10	Rig-Up Equipment	Rig-Up Equipment	2/6/2018	00:15:00	USER	40.30	0.00	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	00:25:00	USER	42.30	0.00	0.00	DISCUSS HES SAFETY AND JOB PROCEDURES WITH RIG CREW AND COMPANY MAN. IDENTIFY CLOSEST HOSPITALS, MUSTER AREAS, AND FIRST AID LOCATIONS. DISCUSSED IN DETAIL JOB PROCEDURES AND PUMP SCHEDULE.

Event	12	Start Job	Start Job	2/6/2018	00:39:28	COM6	51.30	8.87	0.00	
Event	13	Other	Other	2/6/2018	00:41:00	USER	277.30	9.21	1.90	PUMP 3 BBLs FRESH WATER TO FILL PUMP AND LINES.
Event	14	Test Lines	Test Lines	2/6/2018	00:46:03	COM6	3467.30	8.29	0.00	CONDUCT A LOW PRESSURE TEST TO 500 PSI TO TEST RED TIGER PRESSURE KICKOUTS. CONDUCTED A HIGH PRESSURE TEST TO 3000 PSI TO TEST PUMP AND LINES. HELD FOR A FEW MINUTES MONITORING PRESSURE LOSS.
Event	15	Pump Spacer 1	Pump Spacer 1	2/6/2018	00:49:42	COM6	213.30	8.33	2.90	PUMPED FRESH WATER TO BREAK CIRCULATION. PUMPED 5 BBLs TO BREAK CIRCULATION. PUMPED AT 3 BPM @ 225 PSI.
Event	16	Pump Spacer 2	Pump Spacer 2	2/6/2018	00:50:37	COM6	203.30	8.33	2.90	PUMPED 10 BBLs OF DYED SPACER. PUMPED DYED SPACER AT 3 BPM @ 200 PSI.
Event	17	Shutdown	Shutdown	2/6/2018	00:53:00	USER	188.30	8.36	2.90	SHUTDOWN TO WEIGH UP CEMENT.
Event	18	Check Weight	Check weight	2/6/2018	00:56:38	COM6	302.30	13.53	4.60	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	19	Pump Cement	Pump Cement	2/6/2018	00:57:40	COM6	297.30	13.58	4.60	PUMPED 174 BBLs OF PRIMARY CEMENT. 560 SACKS @ 13.5 #/GAL 1.74 CUFT/SK 9.2 GAL/SK. WE PUMPED CEMENT AT 8 BPM @ 520 PSI. MONITORING PRESSURE AS WE PUMPED. WE HAD GOOD CIRCULATION.
Event	20	Check Weight	Check weight	2/6/2018	00:58:48	COM6	276.30	13.43	4.60	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	21	Shutdown	Shutdown	2/6/2018	01:23:49	COM6	100.30	18.00	0.00	
Event	22	Drop Top Plug	Drop Top Plug	2/6/2018	01:25:19	COM6	57.30	16.62	0.00	DROP 9.625" TOP PLUG. TOP PLUG DROPPED BY BRYCE MUIR AND WITNESSED BY THE COMPANY MAN.
Event	23	Pump Displacement	Pump Displacement	2/6/2018	01:26:02	COM6	75.30	13.02	1.70	WE PUMPED 122 BBLs OF FRESH WATER DISPLACEMENT. WE WASHED UP ON TOP OF THE PLUG WITH THE FIRST 10 BBLs OF DISPLACEMENT. WE PUMPED DISPLACEMENT AT 8 BPM @ 370 PSI. MONITORING PRESSURE AS WE PUMPED.
Event	24	Displ Reached Cmnt	Displ Reached Cmnt	2/6/2018	01:33:30	USER	285.30	7.64	8.00	PLUG REACHED CEMENT AT 36 BBLs OF DISPLACEMENT PUMPED. WE GOT DYED SPACER TO SURFACE AT 79 BBLs DISPLACEMENT PUMPED. AT 89 BBLs OF DISPLACEMENT PUMPED WE GOT GOOD CEMENT TO SURFACE. WE GOT 33 BBLs OF CEMENT TO SURFACE. WE BEGAN TO SLOW OR RATE TO LAND THE PLUG.

Event	25	Bump Plug	Bump Plug	2/6/2018	01:47:37	COM6	1081.30	7.67	0.00	WE LANDED THE PLUG AT 122 BBLS OF DISPLACEMENT PUMPED. WE LANED AT 4.5 BPM @ 650 PSI AND PRESSURED UP TO 1260 PSI. HELD PRESSURE FOR LESS THAN 1 MINUTE.
Event	26	Check Floats	Check Floats	2/6/2018	01:48:00	USER	494.30	7.70	0.00	FLOATS HELD. WE GOT 1 BBL BACK TO THE RED TIGER.
Event	27	End Job	End Job	2/6/2018	01:49:06	COM6	53.30	7.65	0.00	
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/6/2018	02:00:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKING IRON ON LOCATION.
Event	29	Rig-Down Equipment	Rig-Down Equipment	2/6/2018	02:15:00	USER				
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/6/2018	03:30:00	USER				DISCUSSED HAZARD ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER. DISCUSSED ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP AND FUEL.
Event	31	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/6/2018	03:45:00	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

