

# HALLIBURTON

iCem<sup>®</sup> 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**

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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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]**

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## 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-68W-1146FSL-2121FEL										
Contractor: Patterson 901				Rig/Platform Name/Num: Patterson 901						
Job BOM: 7521 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX38199				Srvc 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 ft3/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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
2	SwiftCem	SWIFTCM (TM) SYSTEM	560	sack	13.5	1.74		5	9.2	
9.20 Gal		FRESH WATER								

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*Cementing Job Summary*

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /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									
<p>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.</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	2/6/2018	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 PRESSUIZED 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.

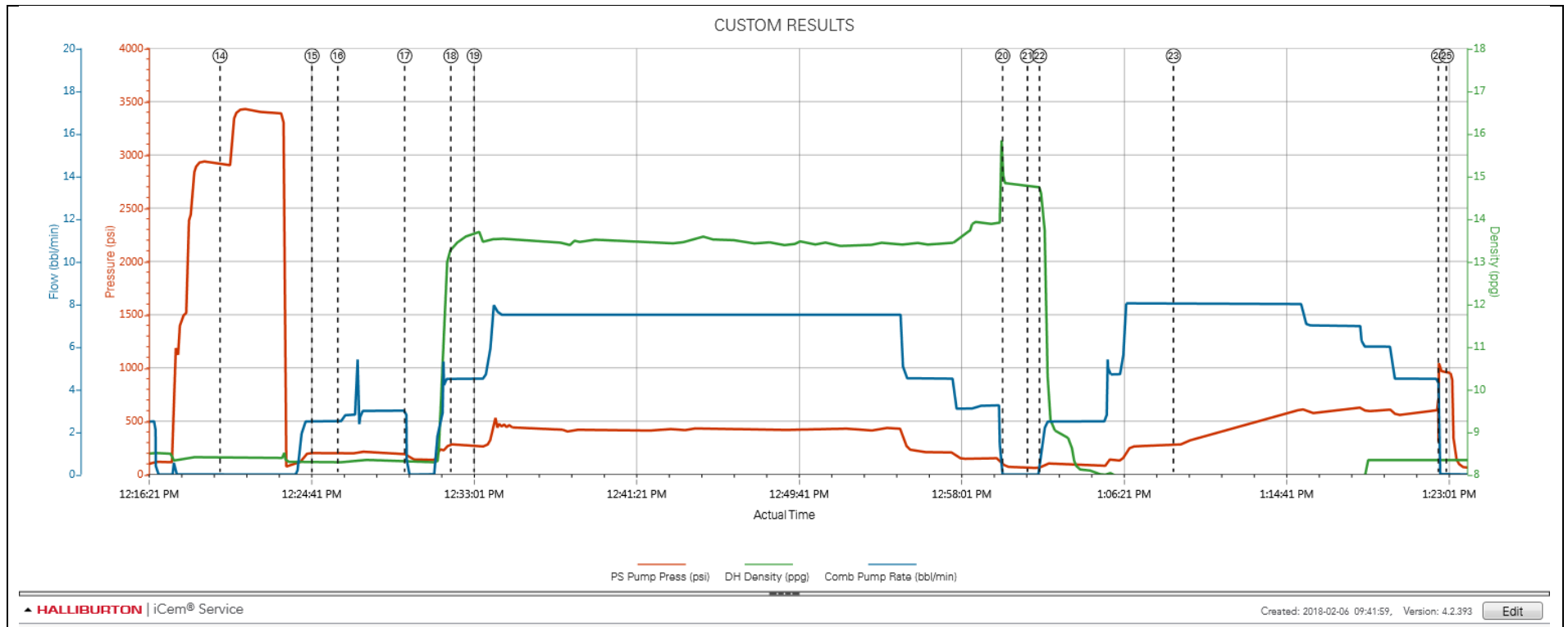


WE PRESSURED UP TO 980 PSI AND HELD FOR LESS THAN 1 MINUTE.

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

