

# HALLIBURTON

iCem<sup>®</sup> Service

## **EXTRACTION OIL & GAS**

Date: Monday, February 19, 2018

### **Coyote Trails 34S-20-10N Surface**

Job Date: Wednesday, February 07, 2018

Sincerely,

**Bryce Hinsch**

## Legal Notice

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## Table of Contents

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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.....	12
3.1	Extraction Coyote Trails 34S-20-10N Surface Job Chart.....	12

## 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-20-10N** 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 bbls 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]**

*The Road to Excellence Starts with Safety*

Sold To #: 369404		Ship To #: 3843032		Quote #:		Sales Order #: 0904613744					
Customer: EXTRACTION OIL & GAS -				Customer Rep: KALYN HOLGATE							
Well Name: COYOTE TRAILS			Well #: 34S-20-10N			API/UWI #: 05-123-45994-00					
Field: WATTENBERG		City (SAP): ERIE		County/Parish: WELD			State: COLORADO				
Legal Description: SW SE-28-1N-68W-1146FSL-2139FEL											
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							
<b>Job</b>											
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						
<b>Well Data</b>											
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	
<b>Tools and Accessories</b>											
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		
<b>Fluid Data</b>											
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	SWIFTCEM (TM) SYSTEM	560	sack	13.5	1.74		5	9.2

9.20 Gal

**FRESH WATER**

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	Fresh Water	Fresh Water	122	bbl	8.33				

Cement Left In Pipe	Amount	Reason	Shoe Joint
	42 ft		

**Comment: WE ARRIVED ON LOCATION AT 1700 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 636 PSI AND PRESSURED UP TO 1013 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 <i>(psi)</i>	Downhole Density <i>(ppg)</i>	Combined Pump Rate <i>(bbl/min)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	2/6/2018	14:00:00	USER					CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	2/6/2018	15:00:00	USER					LOAD UP ALL MATERIALS REQUIRED TO PERFORM JOB. DOWNLOAD ALL NECESSARY PAPERWORK NEEDED TO COMPLETE SURFACE CASING JOB.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/6/2018	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	2/6/2018	16:00:00	USER					
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	2/6/2018	17:00:00	USER					
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/6/2018	17:05:00	USER					ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS. DISCUSS BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT IN EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/6/2018	17:15:00	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	17:30:00	USER					RIG UP IRON TO THE RED ZONE.
Event	9	Other	Other	2/6/2018	18:00:00	USER					WAIT FOR RIG TO FINISH RUNNING CASING.
Event	10	Rig-Up Equipment	Rig-Up Equipment	2/7/2018	03:40:00	USER	42.30	0.00	0.00	0.0	PRE LOAD 9.625" TOP PLUG. PLUG LOADED BY BRYCE MUIR AND WITNESSED BY COMPANY MAN. RIG UP PLUG CONTAINER, MANIFOLD, AND PUMPING LINES.
Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/7/2018	03:55:55	USER	44.30	0.00	0.00	0.0	DISCUSS HES SAFETY AND JOB PROCEDURES WITH RIG CREW AND COMPANY MAN. IDENTIFY CLOSEST HOSTIPAL, MUSTER AREAS, AND FIRST AID LOCATIONS. DISCUSS JOB PROCEDURE IN DETAIL. DISCUSS QUANTITIES OF FLUIDS TO BE PUMPED.
Event	12	Start Job	Start Job	2/7/2018	04:05:07	COM6	62.30	8.34	0.00	0.0	
Event	13	Other	Other	2/7/2018	04:06:00	USER	52.30	8.31	1.00	0.0	PUMP 3 BBLS FRESH WATER TO FILL PUMPS AND LINES.
Event	14	Test Lines	Test Lines	2/7/2018	04:08:43	COM6	87.30	8.58	0.00	3.1	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	2/7/2018	04:17:28	COM6	65.30	8.23	0.00	0.0	PUMPED FRESH WATER AHEAD TO BREAK

											CIRCULATION. WE PUMPED 5 BBLs TO BREAK CIRCULATION. PUMPED AT 3 BPM @ 120 PSI.
Event	16	Pump Spacer 2	Pump Spacer 2	2/7/2018	04:19:44	COM6	111.30	8.32	2.50	5.1	PUMPED 10 BBLs OF DYED SPACER. WE PUMPED SPACER AT 3 BPM @ 135 PSI.
Event	17	Shutdown	Shutdown	2/7/2018	04:23:27	COM6	79.30	8.33	0.00	0.0	MIX UP CEMENT.
Event	18	Pump Cement	Pump Cement	2/7/2018	04:24:37	COM6	73.30	8.31	0.00	0.0	PUMPED 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 @ 470 PSI. WE HAD GOOD CIRCULATION.
Event	19	Check Weight	Check weight	2/7/2018	04:25:21	COM6	257.30	13.52	5.00	2.9	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	20	Check Weight	Check weight	2/7/2018	04:27:09	COM6	236.30	13.45	5.00	11.9	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	21	Shutdown	Shutdown	2/7/2018	04:53:24	COM6	74.30	14.81	0.00	189.7	
Event	22	Drop Top Plug	Drop Top Plug	2/7/2018	04:55:10	COM6	57.30	14.63	0.00	189.7	DROP 9.625" TOP PLUG. PLUG DROPPED BY BRYCE MUIR AND WITNESSED BY COMPANY MAN.
Event	23	Pump Displacement	Pump Displacement	2/7/2018	04:55:45	COM6	71.30	13.97	1.70	0.1	PUMPED 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 RATE AND PRESSURE AS WE PUMPED

Event	Seq	Description	Code	Date	Time	User	Vol	Rate	Flow	Pressure	Notes
											THE REMAINING DISPLACEMENT.
Event	24	Displ Reached Cmnt	Displ Reached Cmnt	2/7/2018	05:03:00	USER	283.30	7.82	8.00	36.0	TOP PLUG REACHED CEMENT AT 36 BBLS PUMPED. WE GOT DYED SPACER TO SURFACE AT 79 BBLS PUMPED. AT 89 BBLS OF DISPLACEMENT WE GOT CEMENT TO SURFACE. WE GOT 33 BBLS OF CEMENT TO SURFACE. WE BEGAN TO SLOW OUR RATE TO LAND THE PLUG.
Event	25	Bump Plug	Bump Plug	2/7/2018	05:16:28	COM6	896.30	7.87	0.00	126.9	WE LANDED THE PLUG AT 122 BBLS OF DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 4 BPM @ 636 PSI AND PRESSURED UP TO 1013 PSI. WE HELD PRESSURE FOR LESS THAN 1 MINUTE.
Event	26	Check Floats	Check Floats	2/7/2018	05:16:35	USER	971.30	7.86	0.00	126.9	FLOATS HELD. WE GOT 1 BBL BACK TO THE RED TIGER.
Event	27	End Job	End Job	2/7/2018	05:17:44	COM6	56.30	7.84	0.00	126.9	
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/7/2018	05:30:00	USER					DISCUSS HAZARDS ASSOCIATE WITH RIGGING DOWN AND PACKING IRON ON LOCATION. DISCUSSED WALKING SURFACES, FATIGUE, PINCH POINTS, AND LINE OF FIRES.
Event	29	Rig-Down Equipment	Rig-Down Equipment	2/7/2018	05:45:00	USER					
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/7/2018	06:55:00	USER					DISCUSSED HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER.

DISCUSSED ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP IF NEEDED.

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Event	31	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/7/2018	07:10:00	USER
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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 Extraction Coyote Trails 34S-20-10N Surface Job Chart

