HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, February 08, 2018

COYOTE TRAILS 34S-20-15N SURFACE

Job Date: Sunday, February 04, 2018

Sincerely,

Julia Nichols

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Table of Contents

1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **COYOTE TRAILS 34S-20-15N** 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 41 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 #:** 3843101	**Quote #:**	**Sales Order #:** 0904613742
Customer: EXTRACTION OIL & GAS -		**Customer Rep:** Kalyn Holgate	
Well Name: COYOTE TRAILS	**Well #:** 34S-20-15N		**API/UWI #:** 05-123-45987-00
Field: WATTENBERG	**City (SAP):** ERIE	**County/Parish:** WELD	**State:** COLORADO
Legal Description: SW SE-28-1N-68W-1145FSL-2049FEL			
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	1606ft		**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	1606	0	0
Open Hole Section			13.5				0	1640	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	9.625			1		Top Plug	9.625	1	HES
Float Shoe	9.625	1	TOPCO	1606		Bottom Plug	9.625		
Float Collar	9.625	1	TOPCO	1564		SSR plug set	9.625		
Insert Float	9.625					Plug Container	9.625	1	HES
Stage Tool	9.625					Centralizers	9.625		

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	SWIFTCEM (TM) SYSTEM	580	sack	13.5	1.74		5	9.2
9.20 Gal		FRESH WATER							

last updated on 2/8/2018 9:22:44 AM Page 1 of 3

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Cementing Job Summary

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	121	bbl	8.33				

Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint

Comment: WE ARRIVED ON LOCATION AT 0300 HOURS ON 02/04/2018. 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 HAD A FEW ISSUES WITH LINES BEING FROZEN AS WELL AS THE PUMP TRUCK. BUT RESOLVED THE ISSUES AND FILLED LINES. WE TESTED OUR IRON AND THEN PUMPED FRESH WATER TO BREAK CIRCULATION. IT TOOK 10 BBLS TO BREAK CIRCULATION. WE THEN PUMPED 10 BBLS DYED SPACER FOLLOWED BY 180 BBLS OF CEMENT. TOP PLUG WAS DROPPED BY BRYCE MUIR AND WITNESSED BY COMPANY REP. WE PUMPED 121 BBLS OF DISPLACEMENT. WE GOT 10 BBLS DYE SPACER TO SURFACE FOLLOWED BY 41 BBLS OF GOOD CEMENT. WE LANDED THE PLUG AT 121 BBLS DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 590 PSI AND PRESSURED UP TO 1320 PSI. HELD FOR ONE MINUTE AND CHECKED FLOATS. FLOATS HELD AND WE GOT 1 BBL BACK TO THE CELLAR.

2.0 Real-Time Job Summary

2.1 Job Event Log

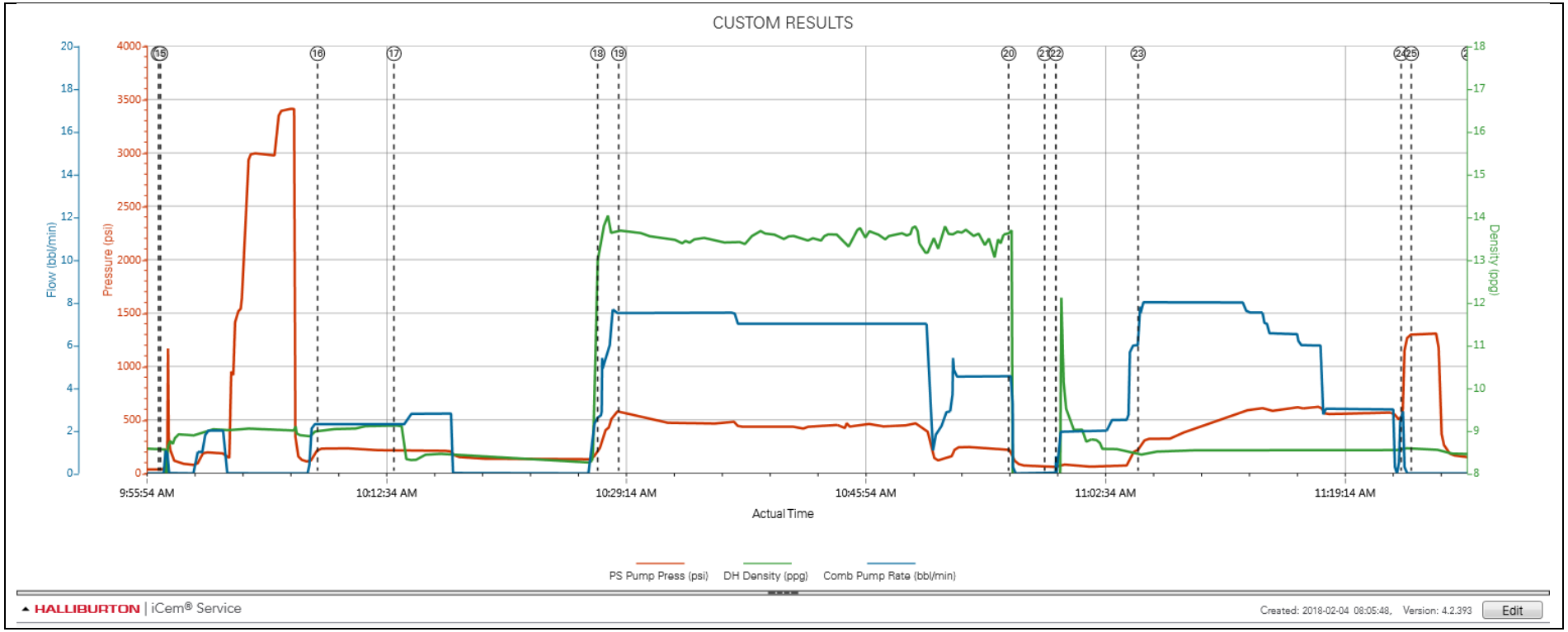
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	2/3/2018	20:00:00	USER				CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	2/3/2018	21:00:00	USER				LOAD ALL REQUIRED EQUIPMENT NEEDED TO PERFORM JOB. DOWNLOAD ALL NECESSARY PAPERWORK REQUIRED.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/4/2018	01:45:00	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	2/4/2018	02:00:00	USER				
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	2/4/2018	03:00:00	USER				
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/4/2018	03:05:00	USER				ASSESS LOCATION FOR POTENTIAL HAZARDS. DISCUSS BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT IN EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/4/2018	03:15:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION.
Event	8	Rig-Up Equipment	Rig-Up Equipment	2/4/2018	03:30:00	USER				RIG UP IRON TO RED ZONE AND WASH UP LINE TO THE CELLAR.
Event	9	Other	Other	2/4/2018	04:00:00	USER				WAIT FOR RIG TO FINISH RUNNING CASING.
Event	10	Rig-Up Equipment	Rig-Up Equipment	2/4/2018	08:20:00	USER	35.30	0.00	0.00	RIG UP PLUG CONTAINER AND MANIFOLD ON RIG FLOOR. PRE LOAD 9.625'' TOP PLUG. PLUG LOADED BY BRYCE MUIR AND WITNESSED BY COMPANY MAN.
Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/4/2018	08:40:00	USER	36.30	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 IF NEEDED. DISCUSS JOB PROCEDURE IN DETAIL.

Event	12	Start Job	Start Job	2/4/2018	09:19:07	COM6	109.30	8.57	0.00	WE TRIED TO PRIME UP THE PUMP, BUT WAS UNABLE TO DO SO. WE FINALLY THAWED OUT THE ISSUE AND PRIMED UP.
Event	13	Other	Other	2/4/2018	09:20:00	USER	53.30	8.56	0.00	WE WENT TO PUMP FRESH WATER AHEAD TO FILL LINES. RIGHT WHEN WE ENGAGED THE PUMP WE PRESSURED UP TO 2000 PSI. WE BLED OFF PRESSURE AND LOCATED AN ICE PLUG IN THE LINES. WE THAWED OUT 3 LONG JOINTS PRIOR TO STARTING THE JOB.
Event	14	Start Job	Start Job	2/4/2018	09:56:51	COM6	36.30	8.58	0.00	
Event	15	Other	Other	2/4/2018	09:57:00	USER	36.30	8.58	0.00	PUMPED 3 BBLS FRESH WATER AHEAD TO FILL PUMP AND LINES. PUMPED AT 2 BPM @ 240 PSI.
Event	16	Pump Spacer 1	Pump Spacer 1	2/4/2018	10:07:55	COM6	231.30	8.99	2.30	PUMPED FRESH WATER TO BREAK CIRCULATION. WE PUMPED 10 BBLS OF FRESH WATER.
Event	17	Pump Spacer 2	Pump Spacer 2	2/4/2018	10:13:14	COM6	216.30	9.12	2.30	PUMPED 10 BBLS OF DYED SPACER. PUMPED AT 3 BPM @ 233 PSI. WE HAD GOOD WELL CIRCULATION.
Event	18	Pump Cement	Pump Cement	2/4/2018	10:27:24	COM6	240.30	13.38	2.60	PUMPED 180 BBLS OF PRIMARY CEMENT. 580 SACKS @ 13.5 #/GAL 1.74 CUFT/SK 9.2 GAL/SK. WE HAD GOOD WELL CIRCULATION. WE PUMPED CEMENT AT 8 BPM @ 520 PSI.
Event	19	Check Weight	Check weight	2/4/2018	10:28:52	COM6	575.30	13.67	7.60	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	20	Shutdown	Shutdown	2/4/2018	10:56:00	USER	205.30	13.63	4.60	
Event	21	Drop Top Plug	Drop Top Plug	2/4/2018	10:58:29	COM6	62.30	0.34	0.00	DROP 9.625'' TOP PLUG. PLUG DROPPED BY BRYCE MUIR AND WITNESSED BY COMPANY MAN.
Event	22	Pump Displacement	Pump Displacement	2/4/2018	10:59:17	COM6	63.30	0.34	1.10	PUMPED 121 BBLS OF FRESH WATER DISPLACEMENT. WE WASHED UP ON TOP OF THE PLUG WITH THE FIRST 10 BBLS. WE PUMPED DISPLACEMENT AT 8 BPM @ 340 PSI. WE HAD GOOD CIRCULATION.
Event	23	Displ Reached Cmnt	Displ Reached Cmnt	2/4/2018	11:05:00	USER	252.30	8.43	7.50	THE PLUG REACHED CEMENT AT 17 BBLS PUMPED. WE GOT DYED SPACER TO SURFACE AT 70 BBLS OF DISPLACEMENT PUMPED. WE MONITORED PRESSURE AND SLOWED OUR RATE. WE GOT GOOD CEMENT TO SURFACE AT 80 BBLS PUMPED. WE GOT 41 BBLS OF GOOD CEMENT TO SURFACE.
Event	24	Bump Plug	Bump Plug	2/4/2018	11:23:17	COM6	875.30	8.56	2.90	WE LANDED THE PLUG AT 121 BBLS OF DISPLACEMENT PUMPED AT 3 BPM @ 590 PSI AND WE PRESSURED UP TO

										1320 PSI. WE HELD PRESSURE FOR LESS THAN A MINUTE.
Event	25	Check Floats	Check Floats	2/4/2018	11:24:00	USER	1305.30	8.58	0.00	FLOATS HELD AND WE GOT APPROX. 1 BBL BACK TO THE CELLAR.
Event	26	End Job	End Job	2/4/2018	11:28:00	USER	146.30	8.45	0.00	
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/4/2018	11:40:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKING IRON ON LOCATION.
Event	28	Rig-Down Equipment	Rig-Down Equipment	2/4/2018	12:00:00	USER				
Event	29	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/4/2018	13:00:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER. DISCUSSED ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP.
Event	30	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/4/2018	13:15:00	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