

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Thursday, February 08, 2018

COYOTE TRAILS 34S-20-16N SURFACE

Job Date: Saturday, February 03, 2018

Sincerely,

Julia Nichols

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **COYOTE TRAILS 34S-20-16N** 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 40 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 #: 3843209		Quote #:		Sales Order #: 0904610847					
Customer: EXTRACTION OIL & GAS -				Customer Rep: Kayln Holghte							
Well Name: COYOTE TRAILS			Well #: 34S-20-16N			API/UWI #: 05-123-45990-00					
Field: WATTENBERG		City (SAP): ERIE		County/Parish: WELD		State: COLORADO					
Legal Description: SW SE-28-1N-88W-1144FSL-2031FEL											
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		1620ft		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	1620	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	1620		Bottom Plug	9.625				
Float Collar	9.625	1	TOPCO	1579		SSR plug set	9.625				
Insert Float	9.625					Plug Container	9.625		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 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			600	sack	13.5	1.74		5	9.2
9.20 Gal		FRESH WATER									

last updated on 2/8/2018 9:03:47 AM

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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		
<p>Comment: WE ARRIVED ON LOCATION AT 1500 HOURS ON 02/03/2018. 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 50 BBLS TO BREAK CIRCULATION. WE THEN PUMPED 10 BBLS DYED SPACER FOLLOWED BY 186 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 40 BBLS OF GOOD CEMENT. WE LANDED THE PLUG AT 122 BBLS DISPLACEMENT PUMPED. WE LANDED THE PLUG AT 610 PSI AND PRESSURED UP TO 885 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	2/3/2018	11:00:00	USER				CREW CALLED OUT TO PERFORM SURFACE CASING JOB FOR EXTRACTION OIL AND GAS.
Event	2	Other	Other	2/3/2018	12:00:00	USER				LOAD UP ALL REQUIRED EQUIPMENT AND MATERIALS NEEDED TO PERFORM JOB.
Event	3	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/3/2018	14:00:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS TO LOCATION. DISCUSS 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	2/3/2018	14:15:00	USER				
Event	5	Arrive at Location from Service Center	Arrive at Location from Service Center	2/3/2018	15:00:00	USER				
Event	6	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/3/2018	15:05:00	USER				ASSESS LOCATION TO IDENTIFY POTENTIAL HAZARDS. DISCUSS BEST WAY TO SPOT PUMPING EQUIPMENT. SPOT PUMPING EQUIPMENT.
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/3/2018	15:15:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING UP AND PACKING IRON ON LOCATION.
Event	8	Rig-Up Equipment	Rig-Up Equipment	2/3/2018	15:30:00	USER				
Event	9	Other	Other	2/3/2018	16:00:00	USER				RIG RUNNING CASING.
Event	10	Rig-Up Equipment	Rig-Up Equipment	2/3/2018	17:00:00	USER	53.30	8.34	0.00	RIG UP PLUG CONTAINER, MANIFOLD, AND PUMPING LINES. GET READY TO START JOB.
Event	11	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/3/2018	17:30:00	USER	52.30	8.32	0.00	DISCUSS HES SAFETY AND JOB PROCEDURES WITH RIG CREW AND COMPANY MAN. IDENTIFY CLOSEST HOSPITALS, MUSTER AREAS, AND FIRST AID LOCATIONS. DISCUSS PUMP SCHEDULE AND AMOUNTS OF FLUIDS TO BE PUMPED AND WHEN.
Event	12	Start Job	Start Job	2/3/2018	17:42:54	COM6	50.30	8.30	0.00	

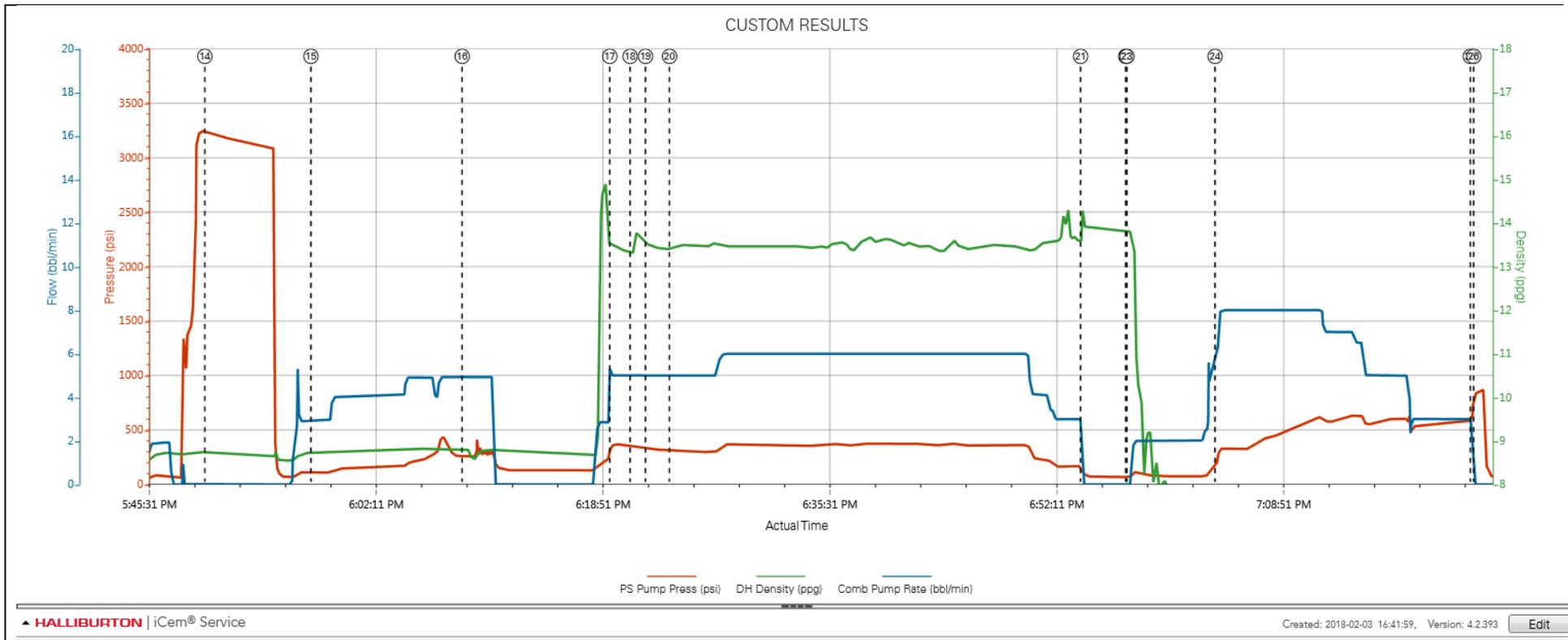
Event	13	Other	Other	2/3/2018	17:44:45	COM6	47.30	8.41	0.00	PUMP 3 BBLS FRESH WATER AHEAD TO FILL PUMP AND LINES.
Event	14	Test Lines	Test Lines	2/3/2018	17:49:46	COM6	3236.30	8.74	0.00	CONDUCT A LOW PRESSURE TEST TO 500 PSI TO TEST RED TIGER PRESSURE KICKOUTS. THEN WE CONDUCTED A HIGH PRESSURE TEST TO 3000 PSI TO TEST PUMP AND LINES.
Event	15	Pump Spacer 1	Pump Spacer 1	2/3/2018	17:57:34	COM6	110.30	8.73	2.90	PUMPED 50 BBLS OF FRESH WATER TO BREAK CIRCULATION. PUMPED AT 5 BPM @ 450 PSI. GOOD WELL CIRCULATION.
Event	16	Pump Spacer 2	Pump Spacer 2	2/3/2018	18:08:41	COM6	260.30	8.81	4.90	PUMPED 10 BBLS DYED SPACER. PUMPED AT 5 BPM @ 270 PSI. GOOD CIRCULATION.
Event	17	Check Weight	Check weight	2/3/2018	18:19:32	COM6	358.30	13.52	5.00	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	18	Pump Cement	Pump Cement	2/3/2018	18:21:01	COM6	357.30	13.32	5.00	PUMPED 186 BBLS OF PRIMARY CEMENT. 600 SACKS @ 13.5 #/GAL 1.74 CUFT/SK 9.2 GAL/SK. PUMPED CEMENT AT 6 BPM @ 345 PSI. WE HAD GOOD WELL CIRCULATION.
Event	19	Check Weight	Check weight	2/3/2018	18:22:09	COM6	328.30	13.51	5.00	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	20	Check Weight	Check weight	2/3/2018	18:23:55	COM6	318.30	13.43	5.00	PRIMARY CEMENT VERIFIED BY PRESSURIZED MUD BALANCE.
Event	21	Shutdown	Shutdown	2/3/2018	18:54:07	COM6	111.30	14.12	0.00	
Event	22	Drop Top Plug	Drop Top Plug	2/3/2018	18:57:26	COM6	68.30	13.81	0.00	DROPPED 9.625" TOP PLUG. TOP PLUG DROPPED BY BRYCE MUIR AND WITNESSED BY THE COMPANY MAN.
Event	23	Pump Displacement	Pump Displacement	2/3/2018	18:57:31	COM6	68.30	13.81	0.00	PUMPED 122 BBLS OF FRESH WATER DISPLACEMENT. THE FIRST 10 BBLS WE USED TO WASH UP ON TOP OF THE PLUG. PUMPED AT 3 BPM @ 95 PSI. WHEN WE SWAPPED TO 20 BBLS OF DISPLACEMENT GOING DOWN WE INCREASED OUR RATE TO 8 BPM @ 340 PSI.
Event	24	Displ Reached Cmnt	Displ Reached Cmnt	2/3/2018	19:04:00	USER	208.30	7.34	6.20	DISPLACEMENT REACHED CEMENT AT 17 BBLS DISPLACEMENT PUMPED. WE GOT RED DYE TO SURFACE AT 70 BBLS DISPLACEMENT PUMPED. AFTER 82 BBLS OF DISPLACEMENT PUMPED WE GOT GOOD CEMENT TO SURFACE. WE GOT 40 BBLS OF CEMENT TO SURFACE.
Event	25	Bump Plug	Bump Plug	2/3/2018	19:22:45	COM6	730.30	7.33	1.30	WE LANDED THE PLUG AT 122 BBLS OF DISPLACEMENT

PUMPED. LANDED PLUG AT 610 PSI AND PRESSURED UP TO 885 PSI. HELD FOR LESS THAN 1 MINUTE.

Event	26	Check Floats	Check Floats	2/3/2018	19:23:00	USER	845.30	7.34	0.00	FLOATS HELD. WE GOT 1 BBL BACK TO THE RED TIGER.
Event	27	End Job	End Job	2/3/2018	19:25:14	COM6	57.30	7.28	0.00	
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/3/2018	19:40:00	USER				DISCUSS HAZARDS ASSOCIATED WITH RIGGING DOWN AND PACKING IRON ON LOCATION.
Event	29	Rig-Down Equipment	Rig-Down Equipment	2/3/2018	20:00:00	USER				
Event	30	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	2/3/2018	21:00:00	USER				DISCUSS HAZARDS ASSOCIATED WITH DRIVING TRUCKS BACK TO THE SERVICE CENTER. IDENTIFY ROUTE OF TRAVEL, CONVOY ORDER, AND PLACES TO STOP IF NEEDED.
Event	31	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/3/2018	21:15:00	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

