

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Ft. Lupton District, COLORADO

Date: Sunday, January 19, 2020

GP CODY FED 20E-15-2 Surface

Job Date: Saturday, January 04, 2020

Sincerely,

SAM CARPENTER

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **GP Cody Fed 20E-15-2** 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 39 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 #: 3987116		Quote #:		Sales Order #: 0906193449					
Customer: EXTRACTION OIL & GAS -				Customer Rep: COLBY							
Well Name: GP CODY FED			Well #: 20E-15-2		API/UWI #: 05-123-50285-00						
Field: WATTENBERG		City (SAP): GREELEY		County/Parish: WELD		State: COLORADO					
Legal Description: NE NE-20-5N-65W-682FNL-1305FEL											
Contractor:				Rig/Platform Name/Num: Cartel 15							
Job BOM: 7521 7521											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA/H171328				Srvc Supervisor: Lance Carpenter							
Job											
Formation Name											
Formation Depth (MD)		Top		Bottom							
Form Type				BHST							
Job depth MD		1611		Job Depth TVD		1611					
Water Depth				Wk Ht Above Floor		1					
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	
Open hole		13.5					0	1611	0	1611	
Casing		9.625		36			0	1611	0	1611	
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	9.625			1611		Top Plug	9.625	1	HES		
Float Shoe	9.625					Bottom Plug	9.625		HES		
Float Collar	9.625			1567		SSR plug set	9.625		HES		
Insert Float	9.625					Plug Container	9.625		HES		
Stage Tool	9.625					Centralizers	9.625		HES		
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	590	sack	13.5	1.74		5	9.17
9.17 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	121	bbl	8.33				
Cement Left In Pipe		Amount	45 ft		Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride:		500 ppm		Mix Water Temperature:		63 °F
Cement Temperature:		## °F °C	Plug Displaced by:		8.4 lb/gal Water		Disp. Temperature:		## °F °C
Plug Bumped?		Yes	Bump Pressure:		570 psi		Floats Held?		Yes
Cement Returns:		39 bbl	Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment JOB PERFORMED AS DESIGNED. NO ACCIDENT, INJURY OR SPILL. SLURRY DENSITY VERIFIED BY PRESSURIZED MUD BALANCE AND VOLUME VERIFIED BY MIX GALLONS. TOP PLUG DROPPED AFTER CEMENT. BUMPED PLUG AT 3.5 BPM AT 570 PSI. TOOK TO 1100 PSI AND HELD FOR A FEW MINUTES. FLOATS HELD WITH ½ BBL BACK. TOP OF CEMENT – SURFACE WITH 39 BBL BACK SPACE TO SURFACE WITH 10 BBL BACK									

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
Event	1	Comment	Comment	1/3/2020	14:30:00	USER					CREW STAYED FROM PREVIOUS JOB. SUPERVISOR SWAPPED AND ARRIVED ON LOCATION AT 1000. RIG TD'S WELL AND BEGINS CIRCULATION THEN POOH
Event	2	Comment	Comment	1/3/2020	18:00:00	USER					RIG BEGINS RIH CASING
Event	3	Pre-Job Safety Meeting	SAFETY MEETING	1/3/2020	20:15:00	USER					CREW HAS PRE RIG UP AND PRE JOB SAFETY MEETING DISCUSSING MUSTER AREAS, RED ZONES, ROLES, COMMUNICATION, RIG OPERATIONS, CONTINGENCIES, TEAM LIFTING, PINCH POINTS, SLIPS TRIPS FALLS, 3 POINTS OF CONTACT AND THE JOB PROCEEDURE
Event	4	Comment	CASING ON BOTTOM	1/3/2020	20:45:49	COM4	1.00	8.45	0.00	0.00	CASING ON BOTTOM AT 2045
Event	5	Start Job	Start Job	1/3/2020	21:06:25	COM4	2.00	8.44	0.00	0.00	START JOB
Event	6	Test Lines	Test Lines	1/3/2020	21:10:12	COM4	92.00	8.62	0.00	2.60	FILL LINES WITH 3 BBL WATER. PRESSURE TEST HES LINES TO 3000 PSI. HELD FOR A FEW MINUTES, TEST GOOD
Event	7	Pump Spacer 1	Pump Spacer 1	1/3/2020	21:14:27	COM4	46.00	8.58	0.00	0.00	PUMP 10 BBL RED DYE SPACER

Event	8	Check Weight	Check Weight	1/3/2020	21:15:46	COM4	148.00	8.68	2.90	2.90	VERIFIED WEIGHT
Event	9	Pump Lead Cement	Pump Lead Cement	1/3/2020	21:18:19	COM4	125.00	8.67	2.90	0.00	PUP 183 BBL SWIFTCM 13.5# 1.74 YIELD 9.17 GAL 590 SACKS
Event	10	Check Weight	Check Weight	1/3/2020	21:20:05	COM4	381.00	13.51	7.50	6.90	VERIFIED WEIGHT
Event	11	Check Weight	Check Weight	1/3/2020	21:21:34	COM4	394.00	13.74	8.00	18.50	VERIFIED WEIGHT
Event	12	Check Weight	Check Weight	1/3/2020	21:33:34	COM4	352.00	13.57	7.90	113.40	VERIFIED WEIGHT
Event	13	Shutdown	Shutdown	1/3/2020	21:47:51	COM4	64.00	25.67	0.00	206.40	SHUTDOWN.
Event	14	Drop Top Plug	Drop Top Plug	1/3/2020	21:52:30	COM4	16.00	15.86	0.00	206.40	DROP TOP PLUG
Event	15	Pump Displacement	Pump Displacement	1/3/2020	21:52:35	COM4	16.00	15.86	0.00	0.00	PUMP 121 BBL WATER DISPLACEMENT WASHING UP FIRST 10 BBL ON TOP OF PLUG
Event	16	Bump Plug	Bump Plug	1/3/2020	22:13:08	COM4	561.00	8.39	3.50	122.20	BUMP PLUG AT 3.5 BPM AT 570 PSI. TOOK TO 1100 PSI AND HELD FOR A FEW MINUTES
Event	17	Comment	Comment	1/3/2020	22:14:51	USER	1106.00	8.39	0.00	122.60	CHECK FLOATS. FLOATS HELD WITH 1/2 BBL BACK
Event	18	End Job	End Job	1/3/2020	22:21:14	COM4	13.00	8.35	0.00	122.80	END JOB
Event	19	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	1/3/2020	22:25:00	USER	10.00	8.34	0.00	142.40	CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING LINE OF FIRE, RED ZONES, PINCH POINTS, TUGGER OPERATIONS, SLIPS TRIPS FALLS, TEAM LIFTING, RIG OPERATIONS AND BEGIN RIGGING DOWN LINES
Event	20	Depart Location for Shop	Depart Location for Shop	1/4/2020	00:30:00	USER					CREW IS RIGGED DOWN AND READY TO DEPART

3.0 Attachments

3.1 EXTRACTION GP CODY FED 20E-15-2 SURFACE.png

