HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

For: Mike Torres

Date: Sunday, July 14, 2019

Coyote Trails 33W-15-5N

Coyote Trails 33W-15-5N

Job Date: Monday, July 15, 2019

Sincerely,

Nick Roles and Crew

Legal Notice

Disclaimer:

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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 33W-15-5N 5.5" Production** 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 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,

The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3912862	**Quote #:**	**Sales Order #:** 0905835980
Customer: EXTRACTION OIL & GAS-EBUS		**Customer Rep:** MIke Torres and Blaine D.	
Well Name: COYOTE TRAILS	**Well #:** 33W-15-5N		**API/UWI #:** 05-123-48247-00
Field: WATTENBERG	**City (SAP):** ERIE	**County/Parish:** WELD	**State:** COLORADO
Legal Description: SW SE-28-1N-68W-1150FSL-2391FEL			
Contractor: ENSIGN DRLG		**Rig/Platform Name/Num:** ENSIGN 147	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		**Srvc Supervisor:** Nicholas Roles	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	15919ft		**Job Depth TVD**	
Water Depth			**Wk Ht Above Floor**	
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			0	1630	0	1630
Casing	0	5.5	4.892	17			0	15919	0	7795
Open Hole Section			8.5				1630	15932	1630	7795

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	5.5					**Top Plug**	5.5	1	Citadel
Float Shoe	5.5			15919		**Bottom Plug**	5.5		HES
Float Collar	5.5			15914		**SSR plug set**	5.5		HES
Insert Float	5.5					**Plug Container**	5.5	1	HES
Stage Tool	5.5					**Centralizers**	5.5		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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	12.5	2.74		7	
1 lbm/bbl		**FE-2 (100001615)**							
5 lbm/bbl		**SEM-94P, 35 LB SACK - (1023987)**							

205.22 lbm/bbl	**BARITE, BULK (100003681)**
5 lbm/bbl	**SEM-93P, 35 LB SACK - (1023977)**

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	ElastiCem	ELASTICEM (TM) SYSTEM	585	sack	13.2	1.6		8	7.75
0.75 %		**SCR-100 (100003749)**							
7.75 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	GasStop	ELASTICEM (TM) SYSTEM	615	sack	13.2	1.6		8	7.71
0.75 %		**SCR-100 (100003749)**							
5.21 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
4	13.2# ElastiCem	ELASTICEM (TM) SYSTEM	1340	sack	13.2	1.56		8	7.65
7.65 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
5	MMCR Displacement	MMCR Displacement	20	bbl	8.33			8	
0.50 gal/bbl		**MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)**							

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
6	Displacement	Displacement	349	bbl	8.33			8	

Cement Left In Pipe	**Amount**	0 ft	Reason	**Wet Shoe**

Comment Est TOT-6801', TOL-2512' Got 40bbls cap cement to surface.

2.0 Job Summary

2.1 Job Details

Sales Order #:	905835980				
Customer:	Extraction	**Customer Rep:**	Mike Torres		
API/UWI #:					
County/Parish:	USA		**State:**	CO	
Rig Name/Num:	Ensign 147				
Srvc Supervisor:	Nick Roles				

Wellbore Geometry

Description	Size	ID	Weight	Thread	Grade	Top MD	Bottom MD	Top TVD	Bottom TVD
	in	in	lbm/ft			ft	ft	ft	ft
Casing	5.5”		17	BTC	P-110	0	15919	0	7795
Casing	9.625”		36	8rd	J-55		1630	0	1630
Open Hole Section	8.5”					1630	15932	1630	7795
Open Hole Section									

Tools and Accessories

Type	Size	Qty	Make	Depth
	in			ft
Top Plug	5.5	1	Citidel	15913.8
Bottom Plug				
Float Shoe	15919	1		
Float Collar	15913.8			
Wet Shoe Sub				
RSI				
Multi-Stage Tool				
Liner Hanger				
Airlock Sub				

Job Checks		Units	Description					
1	Surface temperature at time of job	°F	85					
2	Actual mud density	lb/gal	10					
3	Mud plastic viscosity (PV)	CP						
4	Mud yield point (YP)	lb/100ft^2						
5	Mud Rheologies (if given)	RPM	600	300	200	100	6	3
		Dial Reading						
6	Time circulated before job	HH:MM	1.5hrs					
7	Mud volume circulated	bbls	400					
8	Rate at which well was circulated	bpm	10					
9	Pipe movement during hole circulation	Y/N	N					
10	Rig pressure while circulating	psi						
11	Rig pressure after circulation	psi						
12	Time from end mud circulation to start of job	HH:MM	00:10					
13	Pipe movement during cementing	Y/N	N					
14	Annular flow before job (gas units)	Units						
15	Annular flow after job (gas units)	Units						
16	Length of rat hole	ft	13					
17	Was there a pipe tally (attach with job packet)	Y/N	Y					
18	Was lost circulation experienced at any time ?	Y/N	No but returns slowed slightly and periodically					
19	Spacer volume to surface	bbls	50					
20	Cement volume to surface	bbls	40					
21	Pressure to land plug	psi	1972					
22	Mix water temperature	deg F	80					
23	Mix water pH	pH	6					
24	Mix water chlorides	ppm	0					

Fluid Pumped: Stage 1									
Fluid #	Fluid Name	Qty	Qty UoM	Density	Yield	Water Requirement	Avg. Rate	Total Mix Fluid	Estimated Top of Fluid
				lbm/gal	ft3/sk	gal/sk	bbl/min	gal	ft
1	Tuned Prime	50bbls		12.5	2.74	16.6	6		0
2									
3									
4									
5									
6									
7									
8									
9									

Fluid Pumped: Stage 2									
Fluid #	Fluid Name	Qty	Qty UoM	Density	Yield	Water Requirement	Avg. Rate	Total Mix Fluid	Estimated Top of Fluid
				lbm/gal	ft3/sk	gal/sk	bbl/min	gal	ft
1	Elasticem	167	BBls	13.2	1.6	7.75	8	4533	0
2									
3									
4									
5									
6									
7									
8									
9									

3.0 Real-Time Job Summary

3.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Water Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	7/14/2019	13:00:00	USER						Called out by Service Coordinator for O/L at 1700
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/14/2019	15:45:00	USER						Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	7/14/2019	16:00:00	USER						Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	7/14/2019	17:00:00	USER						Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/14/2019	17:15:00	USER						Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	7/14/2019	17:30:00	USER						Water test- PH-6, Chlor-0, Temp-80. Cement temp-85.
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/14/2019	19:00:00	USER						Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	7/14/2019	19:26:27	COM4	0.00	7.67	-8.00	8.10	107.00	TD-15932', OH-8.5", TP-15919' 5.5" 17#, TVD-7795', SURF-1630' 9.625" 36#, MUD-10#

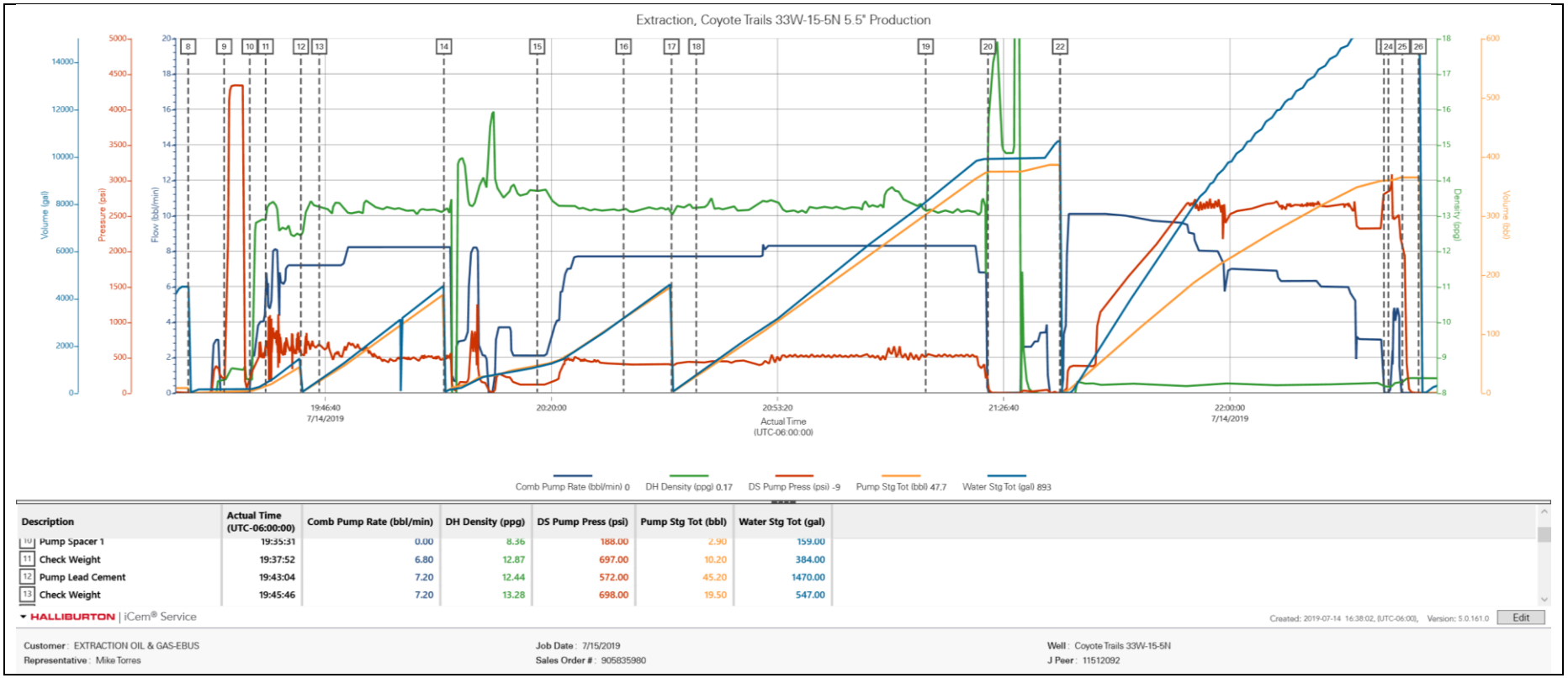
Event	9	Test Lines	Test Lines	7/14/2019	19:31:45	COM4	0.00	8.36	207.00	2.90	3.79	Pumped 5bbls fresh water to fill lines at 3bpm 280psi, shut manifold, and performed 500psi k/o function test, followed with 5th gear stall at 1620psi, proceeded to bring pressure to 4500psi, Pressure stabilized and held with no leaks.
Event	10	Pump Spacer 1	Pump Spacer 1	7/14/2019	19:35:31	USER	0.00	8.36	188.00	2.90	3.79	Pumped 50bbls of 12.5# 2.74y 16.6g/s FDP Spacer with 10g D-air at 7bpm 520psi.
Event	11	Check Weight	Check Weight	7/14/2019	19:37:52	COM4	6.80	12.87	697.00	10.20	9.14	Weight verified with pressurized mud scales.
Event	12	Pump Lead Cement	Pump Lead Cement	7/14/2019	19:43:04	COM4	7.20	12.44	572.00	45.20	35.00	Pumped 585sks or 167bbls of 13.2# 1.6y 7.75g/s Elasticem at 8bpm 650psi.
Event	13	Check Weight	Check Weight	7/14/2019	19:45:46	COM4	7.20	13.28	698.00	19.50	13.02	Weight verified with pressurized mud scales.
Event	14	Pump Cement	Pump Cement	7/14/2019	20:04:09	COM4	8.20	13.15	493.00	0.10	0.05	Pumped 615sks or 175bbls of 13.2# 1.6y 7.71g/s GasStop with 1538g FDP Latex and 30g of D-Air at 8bpm 550psi.
Event	15	Check Weight	Check Weight	7/14/2019	20:17:54	COM4	2.10	13.70	121.00	46.10	26.52	Weight verified with pressurized mud scales.
Event	16	Check Weight	Check Weight	7/14/2019	20:30:38	COM4	7.70	13.18	414.00	126.00	75.10	Weight verified with pressurized mud scales.
Event	17	Pump Tail Cement	Pump Tail Cement	7/14/2019	20:37:42	COM4	7.70	12.97	380.00	0.10	0.07	Pumped 1340sks or 372bbls of 13.2# 1.56y 7.65g/s Elasticem at 8bpm 520psi.
Event	18	Check Weight	Check Weight	7/14/2019	20:41:21	COM4	7.70	13.23	427.00	28.10	18.40	Weight verified with pressurized mud scales.

Event	19	Check Weight	Check Weight	7/14/2019	21:15:10	COM4	8.20	13.13	502.00	301.60	192.33	Weight verified with pressurized mud scales.
Event	20	Shutdown	Shutdown	7/14/2019	21:24:21	COM4	0.00	14.91	90.00	374.30	235.69	Rig blew down iron, followed with 10bbls fresh water through pumps and lines.
Event	21	Drop Top Plug	Drop Top Plug	7/14/2019	21:34:57	COM4	0.00	2.14	-11.00	385.90	253.67	Dropped by HES Supervisor, witnessed by company man.
Event	22	Pump Displacement	Pump Displacement	7/14/2019	21:35:00	COM4	0.00	2.13	-11.00	0.00	0.00	Pumped 369bbls fresh water at 10bpm. Kept pressure below 2700psi throughout.
Event	23	Bump Plug	Bump Plug	7/14/2019	22:22:43	COM4	0.00	8.18	2806.00	359.50	369.50	Slowed down at 340bbls away to 3bpm, final circulating pressure-2300psi. Bump pressure-2825psi.
Event	24	Pressure Up Well	Pressure Up Well	7/14/2019	22:23:22	COM4	0.00	8.17	2844.00	359.50	369.50	Pressured up to burst plug at 3050psi, continued to pump 5bbls at 5bpm 2400psi.
Event	25	Other	Other	7/14/2019	22:25:26	COM4	0.00	8.31	2077.00	364.60	369.50	Released pressure and got 2.5bbls back. Floats held.
Event	26	End Job	End Job	7/14/2019	22:27:49	COM4	0.00	8.41	3.00	364.60	369.50	Est TOT-6801', TOL-2512' Got 40bbls cap cement to surface.
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/14/2019	22:30:00	USER	0.10	8.41	7.00	0.00	6.29	Discussed rigging down hazards and procedure according to HMS with all HES personnel
Event	28	Safety Meeting - Departing Location	Safety Meeting - Departing Location	7/15/2019	00:45:00	USER						Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.

Event	29	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	7/15/2019	01:00:00	USER	Pre journey management prior to departure.

4.0 Attachments

4.1 Coyote Trails 33W-15-5N-Custom Results.png



Description	Actual Time (UTC-06:00:00)	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Water Stg Tot (gal)
10 Pump Spacer 1	19:35:31	0.00	8.36	188.00	2.90	159.00
11 Check Weight	19:37:52	6.80	12.87	697.00	10.20	384.00
12 Pump Lead Cement	19:43:04	7.20	12.44	572.00	45.20	1470.00
13 Check Weight	19:45:46	7.20	13.28	698.00	19.50	547.00

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Created: 2019-07-14 16:38:02, (UTC-06:00), Version: 5.0.161.0 Edit

Customer: EXTRACTION OIL & GAS-EBUS
Representative: Mike Torres

Job Date: 7/15/2019
Sales Order #: 905835980

Well: Coyote Trails 33W-15-5N
J Peer: 11512092