HALLIBURTON

iCem® Service

EXTRACTION OIL & GAS-EBUS

Date: Sunday, March 10, 2019

Coyote Trails 33S-20-4N Production

Job Date: Sunday, February 17, 2019

Sincerely,

Tyler Hill

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 **Coyote Trails 33S-20-4N** cement **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 75 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 Ft. Lupton

The Road to Excellence Starts with Safety

Sold To #: 369404	**Ship To #:** 3843031	**Quote #:**	**Sales Order #:** 0905490795
Customer: EXTRACTION OIL & GAS-EBUS		**Customer Rep:** Hans	
Well Name: COYOTE TRAILS	**Well #:** 33S-20-4N		**API/UWI #:** 05-123-45992-00
Field: WATTENBERG	**City (SAP):** ERIE	**County/Parish:** WELD	**State:** COLORADO
Legal Description: SW SE-28-1N-68W-1148FSL-2247FEL			
Contractor: ENSIGN DRLG		**Rig/Platform Name/Num:** ENSIGN 147	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX38199		**Srvc Supervisor:** Steven Markovich	

Job

Formation Name				
Formation Depth (MD)	**Top**		**Bottom**	
Form Type			**BHST**	
Job depth MD	17749ft		**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	1605	0	0
Casing	0	5.5	4.892	17			0	17749	0	0
Open Hole Section			8.5				1605	17751	0	0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make
Guide Shoe	5.5			17749		**Top Plug**	5.5		HES
Float Shoe	5.5					**Bottom Plug**	5.5		HES
Float Collar	5.5					**SSR plug set**	5.5		HES
Insert Float	5.5					**Plug Container**	5.5		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	12.5 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	12.5	2.73		6	
5 lbm/bbl		**SEM-94P, 35 LB SACK - (1023987)**							
34.60 gal/bbl		**FRESH WATER**							

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

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	1.57		8	7.66
0.75 %		**SCR-100 (100003749)**							
7.66 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	7.72
0.65 %		**SCR-100 (100003749)**							
5.12 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	1788	sack	13.2	1.57		8	7.66
7.66 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	391	bbl	8.33			8	

Cement Left In Pipe	**Amount**	0 ft		Reason	**Wet Shoe**
Mix Water:	pH 7	**Mix Water Chloride:**	00 ppm	Mix Water Temperature:	**60 °F °C**

Comment Spacer to surface at 286bbls away, cement to surface at 336bbls away bringing 75bbls of cement to surface. Bumped plug at 411bbls away. Final lift pressure was 2743psi. Plug burst at 3555psi and then pumped a 5bbl wet shoe. Estimated Top of Tail Cement 5495', Estimated Top of Lead Cement 1218'.

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	DS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comments
Event	1	Call Out	Call Out	2/16/2019	19:30:00	USER				Job called out at 1930 with an on location time of 0130.
Event	2	Crew Leave Yard	Crew Leave Yard	2/17/2019	00:30:00	USER				JSA with HES crew on directions and road hazards on the way to location
Event	3	Arrive At Loc	Arrive At Loc	2/17/2019	01:00:00	USER				Arrived on location, rig was still running casing. 3500' to run.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/17/2019	01:15:00	USER				JSA and hazard hunt with HES crew
Event	5	Other	Other	2/17/2019	04:52:18	COM4	0.29	-30.00	0.00	
Event	6	Safety Meeting	Safety Meeting	2/17/2019	06:19:04	USER	0.29	-25.00	0.00	Safety meeting with HES and rig crew on job safety and procedure.
Event	7	Start Job	Start Job	2/17/2019	06:31:29	COM4	8.51	-27.00	0.00	TD 17751' TP 17749' FC 17747' 5 1/2" 17# Production Casing, 8 1/2" Open Hole, 9 5/8" 36# Surface Casing set at 1605', TVD 7785', Mud# 10.6ppg
Event	8	Test Lines	Test Lines	2/17/2019	06:33:26	COM4	8.32	326.00	0.00	Set kick outs to 500psi and check low pressure ick outs, then bring pressure up to 5000psi and hold.
Event	9	Pump Spacer 1	Pump Spacer 1	2/17/2019	06:43:24	COM4	8.09	-7.00	0.00	Pump 50bbls of 12.5ppg 2.73yield Tuned Spacer. Pumped at 6bbl/min 600psi.
Event	10	Check Weight	Check Weight	2/17/2019	06:51:24	COM4	12.62	686.00	6.30	Weight verified by

										pressurized scales.
Event	11	Pump Lead Cement	Pump Lead Cement	2/17/2019	07:02:45	COM4	13.25	614.00	6.10	Pump 163.58bbls (585sks) of 13.2ppg 1.57yield Cap Cement. Pumped at 8bbl/min 614psi.
Event	12	Check Weight	Check Weight	2/17/2019	07:05:09	COM4	13.08	899.00	8.20	Weight verified by pressurized scales.
Event	13	Check Weight	Check Weight	2/17/2019	07:21:36	COM4	13.38	630.00	8.10	Weight verified by pressurized scales.
Event	14	Pump Cement	Pump Cement	2/17/2019	07:23:22	COM4	13.06	571.00	8.10	Pump 175.25bbls (615sks) of 13.2ppg 1.6yield Lead Cement mixed with latex water. Pumped at 8bbl/min 675psi
Event	15	Pump Tail Cement	Pump Tail Cement	2/17/2019	07:47:08	COM4	13.21	602.00	8.10	Pump 499.96bbls (1788sks) 13.2ppg 1.57yield Tail Cement. Pumped at 8bbl/min 640psi.
Event	16	Check Weight	Check Weight	2/17/2019	07:59:25	COM4	13.20	579.00	8.20	Weight verified by pressurized scales.
Event	17	Shutdown	Shutdown	2/17/2019	08:52:42	COM4	15.46	98.00	0.00	Shutdown and clean lines.
Event	18	Drop Top Plug	Drop Top Plug	2/17/2019	09:06:52	COM4	8.24	0.00	0.00	Plug loaded and dropped in front of company rep.
Event	19	Pump Displacement	Pump Displacement	2/17/2019	09:06:56	COM4	8.25	0.00	0.00	Pump 411bbls of H2O. First 20bbls with MMCR. Pumped at 8bbl/min and slowed rate with pressure increase. Spacer to surface at 286bbls away, cement to surface at 336bbls away bringing 75bbls to surface.
Event	20	Bump Plug	Bump Plug	2/17/2019	10:07:19	COM4	8.38	2727.00	4.00	Bumped plug at 411bbls away, final lift pressure was 2743psi. Brought pressure 500psi over and held.

Event	21	Other	Other	2/17/2019	10:10:05	USER	8.39	3305.00	0.00	Kicked in pumps at 2 bbl/min to burst plug.
Event	22	Other	Other	2/17/2019	10:10:24	USER	8.36	3541.00	2.10	Plug burst at 3555psi, Increased rate to 4bbl/min and pumped a 5bbl wet shoe.
Event	23	End Job	End Job	2/17/2019	10:13:47	COM4	8.35	4.00	0.00	Thank you Steve Markovich and crew.

3.0 Attachments

3.1 Coyote Trails 33S-20-4N Production.png