

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY-EBUS

State Antelope X-D-3HN Production

Job Date: Tuesday, October 25, 2022

Sincerely,

Meghan Van Zyl

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 **State Antelope X-D-3HN** 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 50 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

Sold To #: 324725		Ship To #: 324725		Quote #:		Sales Order #: 0908195230				
Customer: BONANZA CREEK ENERGY-EBUS				Customer Rep: Josh Johnson						
Well Name: State Antelope			Well #: X-D-3HN			API/UWI #: 05-123-51721-00				
Field:		City (SAP): GILL		County/Parish: WELD			State: COLORADO			
Legal Description:										
Contractor: PATTERSON-UTI ENERGY				Rig/Platform Name/Num: PATTERSON 345						
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066				Srvc Supervisor: Nicholas Roles						
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		12058ft		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		9.625	8.921	36			0	1668	0	1668
Casing	0	5.5	4.778	20			0	12058	0	6265
Open Hole Section			8.5				1668	12068	1668	6565
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			12058		Bottom Plug	5.5	1	CITADEL	
Float Collar	5.5			12053		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	Tuned Prime Cement Spacer	TUNED PRIME CEMENT SPACER SYS	50	bbl	11.5	3.74	23.65	6	1775	

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	ElastiCem	SBM CEM ELASTICEM™ SYS	415	sack	13	1.66	8.3	9	3444
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	IsoBond(tm)	SBM CEM FDP-C1371 SYS	670	sack	13	1.55	7.14	9	4784
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
4	ElastiCem	SBM CEM ELASTICEM™ SYS	875	sack	13.2	1.59	7.78	9	6807
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
5	MMCR Displacement	MMCR Displacement	267	bbl	8.33			10	11214
Comment 667bbbls mix water total used.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Date	Time	Dwnhole Density (ppg)	Cmb Pump Rate (bbl/min)	Pump A Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Call Out	10/25/2022	00:00:00					Called out by service coordinator for OL time of 0700. Crew was on previous job when called out.
2	Pre-Convoy Safety Meeting	10/25/2022	09:45:00					Discuss all hazards associated with journey, directions to destination, complete journey management if needed, and ensure all convoy is fit for duty.
3	Depart from Service Center or Other Site	10/25/2022	10:00:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	10/25/2022	11:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
5	Pre-Rig Up Safety Meeting	10/25/2022	11:15:00					Held pre rig up JSA for hazards, hazard hunt with crew, and discussed plan for spotting equipment and rigging up lines for job. Discussed muster points and closest emergency location as well as coordinates.
6	Other	10/25/2022	11:15:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
7	Rig-Up Equipment	10/25/2022	11:20:00					Begin rig up with crew.
8	Rig-Up Completed	10/25/2022	11:45:00					Complete rig up for job to nearest point before red zone.
9	Safety Meeting - Pre Job	10/25/2022	12:00:00	-1.16	0.00	-4.14	0.00	Held job specific hazards as well as confirming job procedure with co man and rest of crew associated with job.

10	Start Job	10/25/2022	12:12:54	-1.12	0.64	-1.41	1.38	TD-12068', OH-8.5", TP-12058' 20#, FC-12053', TVD-6265', SURF-1668' 9.625" 36#, MUD-9#.
11	Drop Bottom Plug	10/25/2022	12:13:25	8.17	2.11	144.33	0.73	Dropped by HES supervisor, witnessed by company man.
12	Test Lines	10/25/2022	12:14:19	8.30	0.00	86.52	3.07	Pumped 5bbls fresh water to fill lines at 4bpm 320psi, shut manifold, and performed 500psi k/o function test, followed with 5th gear stall at 1800psi, proceeded to bring pressure to 5000psi, pressure stabilized and held with no leaks.
13	Pump Spacer 1	10/25/2022	12:24:02	8.33	0.00	21.41	0.00	Pumped 50bbls of 11.5# 3.74y 23.65g/s FDP Spacer with 10g D-air at 6bpm 447psi.
14	Pump Cap Cement	10/25/2022	12:34:49	11.60	5.90	189.00	0.10	Pumped 415sks or 122.7bbls of 13# 1.66y 8.3g/s Elasticem at 9bpm 498psi. Calculated mix gallons-3444g
15	Check Weight	10/25/2022	12:36:03	13.08	6.05	237.63	7.53	Weight verified with pressurized mud scales.
16	Check Weight	10/25/2022	12:40:39	13.14	9.05	483.43	46.49	Weight verified with pressurized mud scales.
17	Pump Lead Cement	10/25/2022	12:48:58	12.99	9.02	479.75	0.15	Pumped 670sks 185bbls 13# 1.55y 7.14g/s Gasstop at 9bpm 550psi. Calculated mix gallons-4748g
18	Check Weight	10/25/2022	12:51:50	13.10	9.00	680.00	26.17	Weight verified with pressurized mud scales.
19	Pump Tail Cement	10/25/2022	13:09:24	12.89	9.01	613.48	0.08	Pumped 875sks or 248bbls 13.2# 1.59y 7.78g/s Elasticem at 9bpm 550psi. Calculated mix gallons-6807g
20	Check Weight	10/25/2022	13:11:50	13.14	7.77	364.71	19.47	Weight verified with pressurized mud scales.
21	Shutdown	10/25/2022	13:40:46	13.87	0.00	184.92	258.55	Shutdown, washed up through pumps and lines with fresh water. Pumped total of 15bbls until clean.
22	Drop Top Plug	10/25/2022	13:48:46	7.34	0.00	18.83	15.37	Dropped by HES supervisor, witnessed by company man.
23	Pump Displacement	10/25/2022	13:48:48	7.34	0.00	18.83	15.37	Pumped 267bbls fresh water at 10bpm.

24	Bump Plug	10/25/2022	14:17:19	8.31	0.00	2809.80	263.31	Slowed down at 250bbbls away to 4bpm, final circulating pressure-2200psi. Bump pressure-2700psi.
25	Other	10/25/2022	14:19:26	8.33	0.00	2882.46	263.31	Released pressure and got 2.5bbbls back. Floats held.
26	End Job	10/25/2022	14:23:47	8.01	0.00	6.26	263.31	Got 50bbbls Cement to surface. Est TOT-5979', TOL-1480'. Used total of 750bbbls fresh water for job.
27	Pre-Rig Down Safety Meeting	10/25/2022	14:24:00	8.14	1.50	5.43	0.03	Held safety meeting with crew prior to rig down, discussed possibility of trapped pressure, swing radius, slips trips and falls, pinch points and risks associated with rig down.
28	Rig Down Lines	10/25/2022	14:30:00	8.26	4.55	78.26	1.78	Begin rig down
29	Rig-Down Completed	10/25/2022	15:30:00					Rig down complete with no injuries, spills or damage to equipment.
30	Pre-Convoy Safety Meeting	10/26/2022	03:45:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
31	Depart Location for Service Center or Other Site	10/26/2022	04:00:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Real Time iCem Job Chart

