

# HALLIBURTON

iCem® Service

## **BONANZA CREEK ENERGY-EBUS**

**State Antelope 43-13-3HN Production**

Job Date: Friday, October 28, 2022

Sincerely,

**Meghan Van Zyl**

## Legal Notice

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **State Antelope 43-13-3HN** 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 42 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**

<b>Sold To #:</b> 324725		<b>Ship To #:</b> 9142982		<b>Quote #:</b>		<b>Sales Order #:</b> 0908199799				
<b>Customer:</b> BONANZA CREEK ENERGY-EBUS				<b>Customer Rep:</b> Same Mares						
<b>Well Name:</b> STATE ANTELOPE			<b>Well #:</b> 43-13-3HN			<b>API/UWI #:</b> 123-51731				
<b>Field:</b>		<b>City (SAP):</b> GILL		<b>County/Parish:</b> WELD			<b>State:</b> COLORADO			
<b>Legal Description:</b>										
<b>Contractor:</b> PATTERSON-UTI ENERGY				<b>Rig/Platform Name/Num:</b> PATTERSON 345						
<b>Job BOM:</b> 7523 7523										
<b>Well Type:</b> OIL										
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srvc Supervisor:</b> Brandon Parker						
<b>Job</b>										
<b>Formation Name</b>										
<b>Formation Depth (MD)</b>		<b>Top</b>			<b>Bottom</b>					
<b>Form Type</b>										
BHST										
<b>Job depth MD</b>		11555ft			<b>Job Depth TVD</b>		6351			
<b>Water Depth</b>										
Wk Ht Above Floor 4										
<b>Perforation Depth (MD)</b>		<b>From</b>			<b>To</b>					
<b>Well Data</b>										
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>
Casing		9.625	8.921	36			0	1643	0	
Casing	0	5.5	4.778	20			0	11548	0	
Open Hole Section			8.5				1643	11555	1643	6351
<b>Tools and Accessories</b>										
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	
Guide Shoe	5.5					Top Plug	5.5	1	citadel	
Float Shoe	5.5	1	citadel	11548		Bottom Plug	5.5	1	citadel	
Float Collar	5.5	1	citadel	11543		SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5	215	scepter	
<b>Fluid Data</b>										
<b>Stage/Plug #: 1</b>										
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>		<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft<sup>3</sup>/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
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 <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	ElastiCem	SBM CEM ELASTICEM™ SYS	415	sack	13	1.66	8.3	9	3445
3	IsoBond(tm)	SBM CEM FDP-C1371 SYS	670	sack	13	1.55	7.14	9	4784
4	ElastiCem	SBM CEM ELASTICEM™ SYS	780	sack	13.2	1.59	7.78	9	6069
5	MMCR Displacement	MMCR Displacement	256	bbl	8.33			10	10765
<b>Comment</b> 639bbbls 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	10/27/2022	18:00:00					crew called out to 5.5" production casing with an on location time 0:00 for Civitas Resources
2	Pre-Convoy Safety Meeting	10/27/2022	21:15:00					meeting with crew to discuss safety/hazards associated with traveling
3	Depart from Service Center or Other Site	10/27/2022	21:30:00					convoy to location
4	Arrive at Location from Service Center	10/27/2022	23:00:00					met with Mr. Sam Mares with Civitas and went over job numbers, water sources, cmt volumes and iron placement
5	Assessment Of Location Safety Meeting	10/27/2022	23:01:00					hazard hunt, check location, bulk and water volumes, td 11555, tp 11548, sj 5', fc 11543, sp 1643, surface casing 9.625 36#, production casing 5.5" 20#, wf 9.1ppg, tvd 6351, eob 6904, kop 5920 Citadel top/bottom plugs and fe, cnt 215
6	Safety Meeting - Pre Rig-Up	10/27/2022	23:30:00					meeting with hes personnel to discuss safety/hazards associated with rigging up
7	Rig-Up Equipment	10/27/2022	23:35:00					rig up iron to red zone, water and bulk
8	Casing on Bottom	10/28/2022	01:35:00					rig landed casing . TRK casing company
9	Rig-Up Equipment	10/28/2022	01:38:00					stab hes plug container so rig could circulate through it

10	Circulate Well	10/28/2022	01:45:00						start circulation, pumped at 11bpm, psi 800 and pumped 7500 strokes
11	Pre-Job Safety Meeting	10/28/2022	02:25:00	0.00	0.00	-11.96	0.00		meeting with all personnel on location to discuss safety/hazards associated with job, also covered job procedures. all personnel signed jsa
12	Break Circulation	10/28/2022	02:41:00	0.00	0.00	-12.41	0.00		ko rig pumps, rig hes iron
13	Start Job	10/28/2022	02:52:05	7.89	0.00	14.34	0.00		start recording real time data
14	Drop Bottom Plug	10/28/2022	02:52:09	8.11	0.00	14.30	0.00		bottom plug pre loaded prior to starting cmt job. plug loaded by Sam Mares with Civitas
15	Pump Water	10/28/2022	02:52:14	8.28	0.00	14.25	0.00		pumped 3bbls at 3bpm top psi was 330
16	Test Lines	10/28/2022	02:54:34	8.39	0.00	157.61	0.00		test eko, 5th gear stall and high psi test 5690. psi held solid 1psi loss/10 seconds. final psi 5682
17	Pump Spacer 1	10/28/2022	03:01:49	8.37	1.04	8.49	0.02		pumped 50bbls of tuned prime, 11.5ppg, 3.74 yield, 23.65 gal/sk pumped at 6bpm and average psi was 300. weight confirmed using pressurized mud scales. calculated all 50bbls of spacer to surface
18	Pump Cement	10/28/2022	03:10:23	11.13	6.00	283.28	42.03		pumped 122.7bbls of cap cement, 415sks, 13ppg, 1.66 yield, 8.3 gal/sk pumped at 9bpm and average psi was 650. weight confirmed using pressurized mud scales. set time at 70bc 5:18hrs. calculated 46bbls of cap cmt to surface, 77bbls left inside surface casing. MW 3445
19	Check Weight	10/28/2022	03:12:59	13.01	6.01	367.82	15.60		
20	Other	10/28/2022	03:25:04	13.01	9.32	636.50	123.56		slow rate to assure cap silo was mt
21	Pump Lead Cement	10/28/2022	03:25:40	12.88	6.52	372.75	0.11		pumped 185bbls of latex cmt, 670sks, 13ppg, 1.55 yield, 7.14gal/sk pumped at 9bpm and average psi was 800. weight confirmed using pressurized mud scales. set time

at 70bc 5:07hrs. calculated top of lead cmt at 1608.14ft.  
 MW 4784

22	Check Weight	10/28/2022	03:27:52	13.00	8.95	818.15	19.24	
23	Slow Rate	10/28/2022	03:46:00	12.98	7.44	755.38	184.65	slow rate from 9bpm to 6bpm to assure lead silo was mt
24	Pump Tail Cement	10/28/2022	03:47:26	12.92	6.37	423.37	0.53	pumped 220.9bbbls of tail cmt, 780sk, 13.2ppg, 1.59 yield, 7.78 gal/sk pumped at 9bpm and average psi was 630. weight confirmed using pressurized mud scales. set time at 70bc is 6:44hrs. calculated top of tail cmt at 6136.48ft. MW 6069
25	Check Weight	10/28/2022	03:50:47	13.21	8.99	644.38	29.41	
26	Slow Rate	10/28/2022	04:12:56	13.20	9.17	676.04	230.11	slow rate from 9bpm to 5bpm to assure tail silo was mt, to assure lines are clear and to maintain 13.2ppg density
27	Shutdown	10/28/2022	04:14:32	12.86	6.44	319.08	240.40	done pumping cmt.
28	Clean Lines	10/28/2022	04:19:52	8.78	0.00	44.57	0.00	closed three valves on hes manifold to well. cleaned lines and pump to 4sided tank below rig stairs. pumped 25bbbls to clean lines and pump
29	Shutdown	10/28/2022	04:30:39	8.31	0.00	56.60	38.66	offline
30	Drop Top Plug	10/28/2022	04:32:27	8.36	0.00	7.30	0.00	top plug pre loaded while hes was washing lines and pumps. loaded by Civitas company rep Sam Mares and witnessed by HES supervisor
31	Pump Displacement	10/28/2022	04:32:33	8.36	1.74	16.44	0.03	calculated disp. fc st at 11543ft x .0222 =256.3bbbls. 10 gallons mmcr in the first 20bbbls of displacement
32	Other	10/28/2022	04:35:00	8.39	8.81	555.10	18.28	displacement caught cmt (19bbbls in)
33	Slow Rate	10/28/2022	04:57:53	8.51	9.68	2807.29	244.01	slow rate at 236bbbls, 10bpm 2800psi to 4bpm, 2150psi

34	Bump Plug	10/28/2022	05:01:51	8.45	3.88	2645.58	259.46	plug bumped at calculated volume 256.3bbls, psi 2150 and ko pumps at 2650, psi climbed to 2970 and held solid, confirmed by Mr. Sam Mares
35	Check Floats	10/28/2022	05:03:54	8.49	0.00	2955.76	0.00	citadel floats held 3bbls back to the pump truck, verified by Mr. Sam Mares
36	End Job	10/28/2022	05:05:07	5.70	0.00	2.26	0.00	job complete
37	Resume	10/28/2022	05:06:00	8.24	0.00	0.29	0.00	clean hes hts
38	Pump Water	10/28/2022	05:13:01	8.19	2.49	20.22	0.20	pumped 40bbls to flush stack/used 100lbs sugar
39	Spacer Returns to Surface	10/28/2022	05:18:00	8.40	8.22	252.19	37.17	rig took back 50bbls of tuned prime spacer
40	Cement Returns to Surface	10/28/2022	05:20:00	0.16	9.91	9.32	54.34	rig took back 42bbls of cap cmt
41	Pre-Rig Down Safety Meeting	10/28/2022	05:21:00	0.20	16.23	8.98	64.41	meeting to discuss safety/hazards associated with rigging down
42	Rig-Down Equipment	10/28/2022	05:22:00	-0.11	0.00	4.07	0.00	
43	Depart Location for Service Center or Other Site	10/28/2022	06:30:00					
44	Other	10/28/2022	06:31:00					Thank You for Choosing Halliburton Cement. Parker and Crew. (970)397-4969

3.0 Attachments

3.1 Real Time iCem Job Chart

