

# HALLIBURTON

iCem® Service

## **BONANZA CREEK ENERGY-EBUS**

**State Antelope V-B-3HN Production**

Job Date: Wednesday, November 09, 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 V-B-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 51 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> 9144505	<b>Quote #:</b>	<b>Sales Order #:</b> 0908228174
<b>Customer:</b> BONANZA CREEK ENERGY-EBUS		<b>Customer Rep:</b> Frank Kinney	
<b>Well Name:</b> STATE ANTELOPE V-B		<b>Well #:</b> 3HN	<b>API/UWI #:</b> 05-123-51727
<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>Srv 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>	11671ft	<b>Job Depth TVD</b>	6280
<b>Water Depth</b>		<b>Wk Ht Above Floor</b>	4
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>

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	1658	0	1658
Casing	0	5.5	4.778	20			0	11657	0	6280
Open Hole Section			8.5				1658	11671	1658	6280

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	1	citadel	11657		Bottom Plug	5.5	1	citadel	
Float Collar	5.5	1	citadel	11652		SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5	120	scepter	

Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /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 <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	ElastiCem	SBM CEM ELASTICEM™ SYS	555	sack	13	1.66	8.3	8	4607
3	IsoBond(tm)	SBM CEM FDP-C1371 SYS	550	sack	13	1.55	7.14	8	3927
4	ElastiCem	SBM CEM ELASTICEM™ SYS	785	sack	13.2	1.59	7.78	8	6107
5	MMCR Displacement	MMCR Displacement	258	bbl	8.33			10	10861
<b>Comment</b> 649bbbls 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	11/8/2022	16:00:00					crew called out to 5.5" production casing with an on location time 22:00 for Civitas Resources
2	Pre-Convoy Safety Meeting	11/8/2022	19:50:00					meeting with crew to discuss safety/hazards associated with traveling
3	Depart from Service Center or Other Site	11/8/2022	20:00:00					convoy to location
4	Arrive at Location from Service Center	11/8/2022	21:30:00					met with Mr. Josh Kliesen with Civitas and went over job numbers, water sources, cmt volumes and iron placement
5	Assessment Of Location Safety Meeting	11/8/2022	21:31:00					hazard hunt, check location, bulk and water volumes, temp 60, ph 6, chlo 0, td 11671, tp 11657, sj 5', fc 11652, sp 1658, surface casing 9.625 36#, production casing 5.5" 20#, wf 9.2ppg, tvd 6280, eob 6624, kop 5641 Citadel top/bottom plugs and fe, cnt 120
6	Safety Meeting - Pre Rig-Up	11/8/2022	21:55:00					meeting with hes personnel to discuss safety/hazards associated with rigging up
7	Rig-Up Equipment	11/8/2022	22:00:00					rig up iron to red zone, water and bulk
8	Casing on Bottom	11/9/2022	00:39:00					rig landed casing . TRK casing compnay
9	Rig-Up Equipment	11/9/2022	00:40:00					stab hes plug container so rig could circulate through it

10	Circulate Well	11/9/2022	00:45:00						start circulation, pumped at 10.6bpm, psi 671 and pumped 7800 strokes
11	Pre-Job Safety Meeting	11/9/2022	01:50:00	0.00	0.00	-20.43	4.54		meeting with all personnel on location to discuss safety/hazards associated with job, also covered job procedures. all personnel signed jsa
12	Break Circulation	11/9/2022	02:05:00	0.00	0.00	-21.61	4.54		ko rig pumps, rig hes iron
13	Start Job	11/9/2022	02:14:30	8.41	0.00	62.67	18.06		start recording real time data
14	Drop Bottom Plug	11/9/2022	02:15:26	2.01	0.00	11.91	0.00		bottom plug pre loaded prior to starting cmt job. plug loaded by Josh Kliesen with Civitas
15	Pump Water	11/9/2022	02:15:42	8.84	1.67	10.58	0.04		pumped 6bbbls at 1.5bpm top psi was 250
16	Test Lines	11/9/2022	02:20:34	8.81	0.00	153.28	0.00		test eko, 5th gear stall and high psi test 5674. psi held solid
17	Pump Spacer 1	11/9/2022	02:26:13	8.67	1.46	17.89	0.02		pumped 50bbbls of tuned prime, 11.5ppg, 3.74 yield, 23.65 gal/sk pumped at 6bpm and average psi was 375. weight confirmed using pressurized mud scales. calculated all 50bbbls of spacer to surface
18	Pump Cement	11/9/2022	02:33:58	11.40	6.11	287.94	0.05		pumped 164bbbls of cap cement, 555sks, 13ppg, 1.66 yield, 8.3 gal/sk pumped at 9bpm and average psi was 700. weight confirmed using pressurized mud scales. set time at 70bc 6:45hrs. calculated 51bbbls of cap cmt to surface, 79bbbls left inside surface casing. MW 4607
19	Other	11/9/2022	02:53:05	13.16	8.51	716.43	157.47		slow rate to assure cap silo was mt
20	Pump Lead Cement	11/9/2022	02:56:09	13.08	6.23	456.69	176.14		pumped 151.8bbbls of latex cmt, 550sks, 13ppg, 1.55 yield, 7.14gal/sk pumped at 9bpm and average psi was 950. weight confirmed using pressurized mud scales. set time at 70bc 5:15hrs. calculated top of lead cmt at 2490.58ft. MW 3927
21	Check Weight	11/9/2022	02:57:51	13.07	8.28	855.69	11.25		

22	Slow Rate	11/9/2022	03:14:07	12.99	8.51	923.19	148.13	slow rate from 9bpm to 6bpm to assure lead silo was mt
23	Pump Tail Cement	11/9/2022	03:15:10	12.90	6.23	553.45	154.72	pumped 222.3bbbls of tail cmt, 785sks, 13.2ppg, 1.59 yield, 7.78 gal/sk pumped at 9bpm and average psi was 725. weight confirmed using pressurized mud scales. set time at 70bc is 5:13hrs. calculated top of tail cmt at 6211.17ft. MW 6107
24	Check Weight	11/9/2022	03:18:30	13.28	8.93	791.06	22.62	
25	Check Weight	11/9/2022	03:25:40	13.06	9.32	902.89	87.96	
26	Slow Rate	11/9/2022	03:38:27	13.18	6.10	675.51	195.70	slow rate from 9bpm to 6bpm to assure tail silo was mt, to assure lines are clear and to maintain 13.2ppg density
27	Shutdown	11/9/2022	03:46:20	13.22	6.06	384.16	243.63	done pumping cmt.
28	Clean Lines	11/9/2022	03:51:04	10.28	0.86	70.92	0.01	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	11/9/2022	03:58:00	8.34	4.17	160.67	21.69	offline
30	Drop Top Plug	11/9/2022	03:59:32	8.35	0.00	36.70	0.00	top plug pre loaded while hes was washing lines and pumps. loaded by Civitas company rep Josh Kliesen and witnessed by HES supervisor
31	Pump Displacement	11/9/2022	04:00:00	8.27	2.97	68.62	0.12	calculated disp. fc st at 11652ft x .0222 =258.7bbbls. 10 gallons mmcr in the first 20bbbls of displacement, 10 gallons Bellacide 300W
32	Other	11/9/2022	04:01:39	8.55	9.99	780.00	14.99	displacement caught cmt (19bbbls in)
33	Slow Rate	11/9/2022	04:24:11	8.52	9.41	3025.83	241.63	slow rate at 240bbbls, 9.5bpm 3000psi to 4bpm, 2200psi
34	Bump Plug	11/9/2022	04:29:22	8.49	4.07	2727.39	262.97	plug bumped at calculated volume 258.7bbbls, psi 2250and ko pumps at 2750, psi climbed to 3094 and held solid, confirmed by Mr. Josh Kliesen

35	Check Floats	11/9/2022	04:30:57	8.55	0.00	3075.79	0.00	citadel floats held 3bbls back to the pump truck, verified by Mr. Josh Kliesen
36	End Job	11/9/2022	04:31:51	7.96	0.00	69.00	0.00	cmt job complete
37	Start Job	11/9/2022	04:38:48	8.25	0.33	28.60	0.03	
38	Resume	11/9/2022	04:39:00	8.21	1.71	38.71	0.13	clean hes hts
39	Pump Water	11/9/2022	04:40:00	8.30	3.26	108.68	3.23	pumped 22bbls to flush stack/used 100lbs sugar
40	End Job	11/9/2022	04:47:03	0.48	0.00	-73.37	29.28	
41	Spacer Returns to Surface	11/9/2022	04:48:00	0.48	0.00	-3.26	0.00	rig took back 50bbls of tuned prime spacer
42	Cement Returns to Surface	11/9/2022	04:48:34	0.48	0.00	-2.39	0.00	rig took back 51bbls of cap cmt
43	Pre-Rig Down Safety Meeting	11/9/2022	04:50:00	0.48	0.00	-6.24	0.00	meeting to discuss safety/hazards associated with rigging down
44	Rig-Down Equipment	11/9/2022	04:52:00	0.48	0.00	-5.89	0.00	
45	Depart Location for Service Center or Other Site	11/9/2022	06:00:00					
46	Other	11/9/2022	06:01:00					Thank You for Choosing Halliburton Cement. Parker and Crew. (970)397-4969

3.0 Attachments

3.1 Real Time iCem Job Chart

