

HALLIBURTON

iCem® Service

BONANZA CREEK ENERGY - EBUS

State Antelope U-A-3HN Production

Job Date: Monday, November 14, 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 U-A-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 #: 9144980		Quote #:		Sales Order #: 0908236146				
Customer: BONANZA CREEK ENERGY-EBUS				Customer Rep: Josh Kleisen						
Well Name: STATE ANTELOPE			Well #: U-A-3Hn			API/UWI #: 123-51729				
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: OIL										
Sales Person: HALAMERICA\HX41066				Srv Supervisor: Nicholas Roles						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11932ft		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	1646	0	1646
Casing	0	5.5	4.892	17			0	11932	0	6196
Open Hole Section			8.5				1646	11945	1646	6196
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			11932		Bottom Plug	5.5	1	CITADEL	
Float Collar	5.5			11927		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	555	sack	13	1.66	8.3	9	4606
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	550	sack	13	1.55	7.14	9	3927
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	825	sack	13.2	1.59	7.78	8	6419
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	277	bbl	8.33			8.98	11634
Comment 700bbls 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	11/13/2022	09:00:00					Called out by service coordinator for OL time of 1400.
2	Pre-Convoy Safety Meeting	11/13/2022	13:45:00					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	11/13/2022	14:00:00					Depart from service center or other job site.
4	Arrive at Location from Service Center	11/13/2022	15:00:00					Upon arrival to location, signed in with onsite safety personnel. Met with company man and discussed job specific requirements and specifications.
5	Other	11/13/2022	15:15:00					Mix water test results- PH-7, Chlo-0, Temp-65F.
6	Pre-Rig Up Safety Meeting	11/13/2022	15:30:00					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.
7	Rig-Up Equipment	11/13/2022	15:45:00					Begin rig up with crew.
8	Rig-Up Completed	11/13/2022	16:30:00					Complete rig up for job to nearest point before red zone.
9	Safety Meeting - Pre Job	11/13/2022	19:30:00	8.27	0.00	-2.16	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	11/13/2022	20:00:50	8.08	0.00	4.92	0.00	TD-11945', OH-8.5", TP-11932' 20#, FC-11927', TVD-6196', SURF-1646' 9.625" 36#, MUD-9.1#.
11	Test Lines	11/13/2022	20:02:41	8.33	0.00	204.48	3.13	Pumped 3bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to perform 5th gear stall at 1452psi, continued to bring pressure up to 4500psi. Pressure stabilized and held with no leaks
12	Pump Spacer 1	11/13/2022	20:10:37	8.21	0.00	140.68	0.00	Pumped 50bbls of 11.5# 3.74y 23.65g/s FDP Spacer with 10g D-air at 6bpm 447psi.
13	Check Weight	11/13/2022	20:16:13	12.03	3.13	292.49	19.70	Weight verified with pressurized mud scales.
14	Check Weight	11/13/2022	20:17:20	11.81	5.99	451.73	26.09	Weight verified with pressurized mud scales.
15	Pump Cap Cement	11/13/2022	20:20:32	12.25	5.93	385.25	0.05	Pumped 555sks or 164bbls of 13# 1.66y 8.3g/s Elasticem at 9bpm 498psi. Calculated mix gallons-4606g
16	Check Weight	11/13/2022	20:22:31	13.22	5.93	541.54	11.88	Weight verified with pressurized mud scales.
17	Check Weight	11/13/2022	20:24:31	12.67	7.61	634.77	27.01	Weight verified with pressurized mud scales.
18	Check Weight	11/13/2022	20:29:31	12.80	7.71	602.60	65.69	Weight verified with pressurized mud scales.
19	Pump Lead Cement	11/13/2022	20:40:43	12.82	5.94	419.52	0.05	Pumped 550sks 152bbls 13# 1.55y 7.14g/s Gasstop at 9bpm 550psi. Calculated mix gallons-3927g
20	Check Weight	11/13/2022	20:42:52	13.05	5.96	568.66	12.97	Weight verified with pressurized mud scales.
21	Pump Tail Cement	11/13/2022	20:58:06	13.05	5.83	325.47	0.05	Pumped 825sks or 234bbls 13.2# 1.59y 7.78g/s Elasticem at 9bpm 1120psi. Calculated mix gallons-6807g
22	Check Weight	11/13/2022	21:02:11	13.29	10.30	983.40	41.41	Weight verified with pressurized mud scales.
23	Shutdown	11/13/2022	21:25:14	14.34	0.00	147.59	249.24	Shutdown, washed up through pumps and lines with fresh water. Pumped total of 20bbls until clean.
24	Drop Top Plug	11/13/2022	21:32:51	7.29	0.00	29.96	15.62	Dropped by HES supervisor, witnessed by company man.

25	Pump Displacement	11/13/2022	21:32:54	7.29	0.00	30.32	0.00	Pumped 277bbls fresh water at 10bpm.
26	Bump Plug	11/13/2022	22:03:39	8.40	0.00	2714.76	275.68	Slowed down at 250bbls away to 4bpm, final circulating pressure-2320psi. Bump pressure-2800psi.
27	Other	11/13/2022	22:04:58	8.40	0.00	2849.23	275.68	Released pressure and got 2.5bbls back. Floats held.
28	End Job	11/13/2022	22:06:32	8.19	0.00	22.70	275.68	Got 50bbls Cement to surface. Est TOT-6197', TOL-2471'. Used total of 700bbls fresh water for job.
29	Pre-Rig Down Safety Meeting	11/13/2022	22:10:00					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.
30	Rig Down Lines	11/13/2022	22:30:00					Begin rig down
31	Rig-Down Completed	11/13/2022	23:30:00					Rig down complete with no injuries, spills or damage to equipment.
32	Pre-Convoy Safety Meeting	11/13/2022	23:30:00					Held safety meeting with convoy, discussed trip hazards, directions and all crew fit for duty prior to departure.
33	Depart Location for Service Center or Other Site	11/13/2022	23:45:00					Depart location, if applicable journey will be submitted.

3.0 Attachments

3.1 Real Time iCem Job Chart

