

HALLIBURTON

iCem® Service

BONANZA CREEK ENERGY-EBUS

Ft. Lupton District, Colorado

State Antelope 41-11-3HN Production

Job Date: Friday, November 11, 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 41-11-3HN** 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

Sold To #: 324725		Ship To #: 9144505		Quote #:		Sales Order #: 0908232916				
Customer: BONANZA CREEK ENERGY-EBUS					Customer Rep: Frank Kenny					
Well Name: STATE ANTELOPE			Well #: 41-11-3HN			API/UWI #: 123-51725				
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					Srvc Supervisor: Cody Haley					
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type				BHST						
Job depth MD		11882ft		Job Depth TVD		6335ft				
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	1666	0	0
Casing	0	5.5	4.778	17			0	11872	0	6335
Open Hole Section			8.5				1666	11882	1666	6335
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5					Top Plug	5.5	1	CITIDEL	
Float Shoe	5.5			11872		Bottom Plug	5.5	1	CITIDEL	
Float Collar	5.5			11867		SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5	1	HES	
Stage Tool	5.5					Centralizers	5.5		SCEPTER	
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	8	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	8	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	795	sack	13.2	1.59	7.78	8	6185
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	275	bbl	8.33			8.97	11550
Comment 668bbbls 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 B Pressure (psi)	Cmb Stg Total (bbl)	Comments
1	Call Out	11/10/2022	18:00:00					Crew called out at 1800 on 11/10/2022 for a requested on location time of 0100 on 11/11/2022
2	Safety Meeting	11/10/2022	20:15:00					Pre convoy safety meeting discussed route to location and hazards of driving at night.
3	Crew Leave Yard	11/10/2022	20:30:00					Crew Leaves yard in convoy at 2030 hrs
4	Arrive At Loc	11/10/2022	22:00:00					Crew arrived on location at 2200 hrs. Meet with customer TD 11882', 8.5 OH, TP 11872 5.5' 17#, FC 11876', TVD 6335', P/C 1666' 9.625 36#, OBM WEIGHT 9.2 PPG.
5	Safety Meeting - Pre Rig-Up	11/10/2022	22:15:00					Pre rig up meeting/ hazard hunt around work area.
6	Rig-Up Completed	11/10/2022	23:30:00					Rig up completed
7	Safety Meeting - Pre Job	11/11/2022	03:30:00	0.00	0.00	0.21	0.00	Pre job safety meeting discussed all hazards prior to job and reviewed job procedure.
8	Start Job	11/11/2022	03:40:47	8.36	0.00	12.22	0.00	Start recording data.
9	Drop Bottom Plug	11/11/2022	03:43:21	8.96	0.00	138.22	1.68	Bottom plug verified by Josh
10	Pump Spacer 1	11/11/2022	03:57:22	8.20	0.00	119.91	0.00	Pumped 50 bbls of spacer at 11.5 ppg/3.74 yield/23.65 gal/sack.
11	Pump Cap Cement	11/11/2022	04:14:00	12.46	3.53	143.26	0.06	pumped 164 bbls (555 sks) of cap at 13ppg/1.66 yield/8.3 gal/sack. ETOC = 0'

12	Pump Lead Cement	11/11/2022	04:35:08	11.99	5.25	341.14	0.13	Pumped 151 bbls (550 sacks) of Lead at 13ppg/1.55 yield/7.14 gal/sack. ETOL= 2666.3'
13	Pump Tail Cement	11/11/2022	04:56:31	12.93	8.20	975.62	0.14	Pumped 225 bbls (795 sacks) of Tail at 13.2 ppg/1.59yield/7.78 Gal/sack. ETOTC= 6367.29'
14	Shutdown	11/11/2022	05:31:44	14.23	0.00	86.30	255.38	Shut down swap to wash up pit
15	Clean Lines	11/11/2022	05:38:42	14.32	0.00	16.67	0.00	Clean lines with 20 bbl fresh water
16	Shutdown	11/11/2022	05:47:27	7.85	0.00	13.22	21.56	Swap back to well
17	Drop Top Plug	11/11/2022	05:47:36	7.81	0.00	10.23	21.56	Top plug verified by Josh
18	Pump Displacement	11/11/2022	05:47:44	7.79	0.00	8.54	0.00	pumped 275 bbls of fresh water displacement with 10 gallons of micro matrix retarder in first 20 bbls, 5 gallons of bellacide 300w threw out the rest of displacement.
19	Bump Plug	11/11/2022	06:23:21	8.05	0.00	2938.09	275.55	FCP 2350 PSI @ 4 BPM, BUMP TO 2850 PSI. 3 BBLS back to pump truck floats hold. 43 bbls of cap cement to surface & 50 bbls of spacer.
20	End Job	11/11/2022	06:26:46	7.83	0.00	3.14	275.55	Stop recording data. Washed rig stack with 20 bbls of water added 100 lbs of sugar.
21	Safety Meeting - Pre Rig-Down	11/11/2022	07:00:00					Pre rig down safety meeting.
22	Rig-Down Completed	11/11/2022	08:15:00					Rig down complete
23	Pre-Convoy Safety Meeting	11/11/2022	08:30:00					Pre convoy meeting before leaving location.
24	Crew Leave Location	11/11/2022	08:40:00					Crew departs location. Thank you.

3.0 Attachments

3.1 Real Time iCem Job Chart

