

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY-EBUS

Ft. Lupton District, CO

State Antelope 34-31-30XRLNC Production

Job Date: Saturday, February 19, 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 34-31-30XRLNC** 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 54 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 #: 377645	Ship To #: 9048954	Quote #:	Sales Order #: 0907690254
Customer: BONANZA CREEK ENERGY - EBUS		Customer Rep: Tyler Hale	
Well Name: STATE ANTELOPE		Well #: 34-31-30XRLNC	API/UWI #: 05-123-51161-00
Field: WATTENBERG	City (SAP): KERSEY	County/Parish: WELD	State: COLORADO
Legal Description: NE NW-5-4N-62W-584FNL-2551FWL			
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 140	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Neil Getzfreid	

Job

Formation Name	
Formation Depth (MD)	Top <input type="text"/> Bottom <input type="text"/>
Form Type	BHST
Job depth MD	16715ft Job Depth TVD <input type="text"/>
Water Depth	Wk Ht Above Floor <input type="text"/>
Perforation Depth (MD)	From <input type="text"/> To <input type="text"/>

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	8.835	40			0	1700	0	1700
Casing		5.5	4.892	17	TXP-BTC	P110ICY	0	16700	0	6376
Open Hole Section			8.5				1700	16715	0	6376

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	Innovex
Float Shoe	5.5	1	Innovex	16700	Bottom Plug	5.5	1	Innovex
Float Collar	5.5			16695	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Spacer	Tuned Prime Spacer	50	bbl	11.5	3.74	23.65	6	1592

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	Cap Cement	ElastiCem	555	sack	13	1.66	8.3	8	4382

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Lead Cement	IsoBond	560	sack	13	1.55	7.22	6	3820
4	Tail Cement	ElastiCem	1515	sack	13.2	1.59	7.76	6	11463
5	Displacement	MMCR Water	20	bbl	8.4			6	840
5	Displacement	Fresh Water	350	bbl	8.4			6	14700
Cement Left In Pipe									
Amount		5 ft			Reason			Shoe Joint	
Mix Water:		Mix Water Chloride: 0 ppm			Mix Water Temperature: 70 °F				
Cement Temperature: ## °F °C		Plug Displaced by: ## lb/gal kg/m ³ XXXX			Disp. Temperature: ## °F °C				
Plug Bumped? Yes		Bump Pressure: psi			Floats Held? Yes				
Cement Returns: bbl		Returns Density: ## lb/gal kg/m ³			Returns Temperature: ## °F °C				
Comment Total water used for job was 876 bbls.									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Comments
1	Call Out	Call Out	2/18/2022	16:30:00					HES CALLED OUT FOR ON LOCATION AT 2300
2	Depart Home for Location	Depart Home for Location	2/18/2022	19:00:00					HES LEAVE CASPER WY FOR LOCATION
3	Arrive At Loc	Arrive At Loc	2/19/2022	00:30:00					HES ARRIVED ON LOCATION 1 HOUR AND 30 MINUTES LATE
4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/19/2022	00:40:00					JSA FILLED OUT AND REVEIWED- HES TALKED OF HAZARDS PRESENT ON LOCATION AND HOW TO MITIGATE THE RISKS- RIG HAD 5 JOINTS OF CASING LEFT TO RUN
5	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	2/19/2022	01:10:00					JSA FILLED OUT AND REVEIWED- HES TALKED ABOUT HAZARDS ASSOCIATED WITH THE RIG UP AND HOW TO MITIGATE THE RISKS
6	Rig-Up Equipment	Rig-Up Equipment	2/19/2022	01:40:00					WATER LINES RAN TO MIX WATER TANKS AND DISPLACEMENT WATER TANK- BULK LINES RIGGED UP FROM 4 SILOS AND 1 660 TO ELITE- IRON AND HIGH PRESSURE HOSES RAN FROM ELITE TO RIG FLOOR
7	Comment	Well Info/Water Test	2/19/2022	01:45:00					TD:16,715'- TP:16,700' CSG: 5.5" 20# P110- ST: 5'- PREV.CSG:9 5/8" 36# @ 1,700'- MUD: 9.2# OBM- H20: 66F, PH:7, CHLORIDE:0
8	Rig-Up Completed	Rig-Up Completed	2/19/2022	02:10:00					COMPLETED SAFELY

9	Comment	Comment	2/19/2022	02:15:00						AFTER RIG UP WAS COMPLETED- HES ELITE HAD NO POWER FROM THE BATTERIES- NEW BATTERIES WERE PUT ON THE ELITE AND STILL HAD NO POWER- HES MECHANIC WAS CALLED AND DISPATCHED TO LOCATION TO ADDRESS THE ISSUE- HES MECHANIC ARRIVED IN 30 MINUTES TIME AND WAS ABLE TO GET THE ISSUE RESOLVED IN A TIMLEY MANNER- RIG CIRCULATED FOR AN EXTRA HOUR AND 30 MINUTES WHILE WAITING FOR HES.
10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	2/19/2022	03:10:00						PRE JOB SAFETY MEETING WAS HELD ON THE RIG FLOOR- ALL COMPANY REPS, RIG HANDS AND HES IN ATTENDANCE- JSA FILLED OUT AND REVEIWED- HAZARDS OF THE JOB AND WAYS TO MITIGATE THE HAZARDS WERE DISCUSSED
11	Start Job	Start Job	2/19/2022	03:40:47	-2.00	8.60	0.00	0.00		START OF JOB
12	Drop Bottom Plug	Drop Bottom Plug	2/19/2022	03:42:46	-1.00	8.60	0.00	0.00		BOTTOM PLUG LAUNCHED SUCCESSFULLY
13	Other	Fill Lines	2/19/2022	03:43:33	47.00	8.79	0.00	0.00		PUMPED 3 BBLS AHEAD TO FILL LINES PRIOR TO PRESSURE TESTING
14	Pressure Test	Pressure Test	2/19/2022	03:48:16	4635.00	8.94	0.00	3.00		PRESSURE TESTED LINES TO 4500 PSI- TEST SUCCESSFUL
15	Pump Spacer	Pump Spacer	2/19/2022	03:54:04	21.00	8.91	0.00	0.00		PUMPED 50 BBLS OF 11.5# 3.74Y 23.65 GAL/SACK TUNED PRIME SPACER AT 7 BPM- MIX WATER:1,592 GALLONS
16	Check Weight	Check Weight	2/19/2022	03:57:04	211.00	11.56	4.50	8.00		WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES- 11.5#

17	Pump Lead Cement	Pump Cap Lead Cement	2/19/2022	04:03:27	459.00	13.03	6.90	0.80	PUMPED 555 SKS/ 165.1 BBLS OF 13# 1.67Y 8.34 GAL/SACK ELASTICEM CAP CEMENT AT 9 BPM- MIX WATER: 4,382 GALLONS
18	Check Weight	Check Weight	2/19/2022	04:06:35	709.00	13.00	9.00	28.40	WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES- 13#
19	Pump Lead Cement	Pump FDP Lead Cement	2/19/2022	04:22:22	712.00	12.97	9.00	2.60	PUMPED 560 SKS/ 154.6 BBLS OF 13# 1.55Y 7.22 GAL/SACK FDP CEMENT AT 9 BPM- MIX WATER: 3,820 GALLONS
20	Check Weight	Check Weight	2/19/2022	04:24:53	921.00	12.99	9.00	25.20	WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES- 13#
21	Pump Tail Cement	Pump Tail Cement	2/19/2022	04:39:24	688.00	12.89	9.00	155.40	PUMPED 1515 SKS/ 429 BBLS OF 13.2# 1.59Y 7.76 GAL/SACK ELASTICEM TAIL CEMENT AT 9 BPM- MIX WATER: 11,463 GALLONS
22	Check Weight	Check Weight	2/19/2022	04:42:10	670.00	13.19	9.00	24.10	WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES- 13.2#
23	Shutdown	Shutdown	2/19/2022	04:43:57	699.00	13.20	9.00	40.10	UNPLANNED SHUTDOWN DUE TO LINE LEAKING ON THE RIG FLOOR
24	Resume	Resume	2/19/2022	04:44:40	20.00	13.49	0.00	40.90	LEAK ADDRESSED ON THE RIG FLOOR- SHUTDOWN FOR A TOTAL OF 2 MINUTES- RESUME PUMPING TAIL
25	Shutdown	Shutdown	2/19/2022	05:32:43	97.00	13.32	0.00	455.20	SHUTDOWN AFTER CEMENT
26	Clean Lines	Clean Lines	2/19/2022	05:35:07	8.00	13.27	0.00	0.00	PUMPED 15 BBLS OF FRESH WATER THROUGH PUMPS AND LINES TO CLEAN OUT LINES PRIOR TO DISPLACEMENT
27	Pump Displacement	Pump Displacement	2/19/2022	05:45:44	11.00	8.91	0.00	0.00	PUMPED 20 BBLS OF MMCR WATER AHEAD AND FINISHED DISPLACEMENT WITH 350.6 BBLS OF FRESH WATER OUT OF DESIGNATED DISPLACEMENT WATER TANK- TOTAL DISPLACEMENT 370.6 BBLS
28	Slow Rate	Slow Rate	2/19/2022	06:05:36	2772.00	8.00	8.90	149.80	RATE WAS SLOWED FROM 10 BPM TO 6.5 BPM DURING DISPLACEMENT UPON COMPNAY REPS

REQUEST TO TRY AND KEEP DISPLACEMENT PRESSURE UNDER 2,800 PSI

29	Slow Rate	Slow Rate	2/19/2022	06:41:12	2700.00	8.08	4.10	366.30	RATE SLOWED TO 4 BPM TO BUMP THE TOP PLUG
30	Bump Plug	Bump Top Plug	2/19/2022	06:44:58	2954.00	7.99	0.00	381.10	TOP PLUG BUMPED ON CALCULATED DISPLACEMENT @ 2,590 PSI- PRESSURE WAS BROUGHT UP TO 3,085 PSI AND HELD FOR 2 MINUTES
31	Check Floats	Check Floats	2/19/2022	06:47:41	791.00	8.24	0.00	381.10	BLD PRESSURE OFF OF THE WELL- FLOATS HELD- 4 BBLs BACK
32	End Job	End Job	2/19/2022	06:49:33	2.00	8.01	0.00	0.00	100% RETURNS THROUGHOUT THE JOB- RECEIVED 50 BBLs OF SPACER AND 54 BBLs OF CEMENT TO SURFACE- TOP OF TAIL@ 6,200 FT- TOP OF FDP CEMENT@2,411 FT- THANK YOU FOR CHOOSING HALLIBURTON CEMENT- NEIL GETZFREID AND CREW
33	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/19/2022	06:55:00	-3.00	7.97	0.00	0.00	JSA FILLED OUT AND REVEIWED- HES DISCUSSED HAZARDS ASSOCIATED RIGGING DOWN THE EQUIPMENT AND WAYS TO MITIGATE THE HAZARDS
34	Rig Down Lines	Rig Down Lines	2/19/2022	07:25:00	22.00	0.32	7.70	111.00	RIG DOWN WATER LINES- BULK EQUIPMENT AND IRON
35	Rig-Down Completed	Rig-Down Completed	2/19/2022	08:05:00					COMPLETED SAFELY
36	Depart Location Safety Meeting	Depart Location Safety Meeting	2/19/2022	08:35:00					JSA FILLED OUT AND REVEIWED- HAZARDS ASSOCIATED WITH THE TRIP HOME ADDRESSED
37	Depart Location	Depart Location	2/19/2022	09:05:00					CREW LEAVE LOCATION

3.0 Attachments

3.1 Real Time iCem Job Chart

