

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY-EBUS

Ft. Lupton District, COLORADO

Pronghorn Fed A-E-31HNB Production

Job Date: Tuesday, December 14, 2021

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 **Pronghorn Fed A-E-31HNB** 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 16 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 #: 369404		Ship To #: 9059003		Quote #:		Sales Order #: 0907562200				
Customer: EXTRACTION OIL & GAS-EBUS					Customer Rep: FRANK KINNEY					
Well Name: PRONGHORN FEDERAL			Well #: A-E-31HNB			API/UWI #: 05-123-51324-00				
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD			State: COLORADO			
Legal Description: 30-5N-61W-2173FSL-631FWL										
Contractor: PATTERSON-UTI ENERGY					Rig/Platform Name/Num: PATTERSON 345					
Job BOM: 7523 7523										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX41066					Srvc Supervisor: Kyle Bath					
Job										
Formation Name										
Formation Depth (MD)		Top				Bottom				
Form Type				BHST						
Job depth MD		11570ft		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	1615	0	1615
Casing		5.5	4.892	17			0	11570	0	6003
Open Hole Section			7.875				1615	11580	1615	6003
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	5.5			11570		Top Plug	5.5		HES	
Float Shoe	5.5					Bottom Plug	5.5		HES	
Float Collar	5.5					SSR plug set	5.5		HES	
Insert Float	5.5					Plug Container	5.5		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	TUNED PRIME CEMENT SPACER SYS	50	bbl	11.5	3.73				
Fluid Data										
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	
2	Cap	SBM CEM ELASTICEM™ SYS	525	sack	13	1.66		8	8.29	

0.30 %		SCR-100, 1200 LB BAG - (1126328)							
8.29 Gal		FRESH WATER							
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
3	FDP-C1371 SYS	SBM CEM FDP-C1371 SYS	430	sack	13	1.55		6	7.21
7.21 Gal		FRESH WATER							
5 %		CHANNELFIX, 44 LB BAG - (1107429)							
0.25 %		SCR-100, 1200 LB BAG - (1126328)							
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
4	ElastiCem	SBM CEM ELASTICEM™ SYS	575	sack	13.2	1.59		8	7.76
0.65 %		HR-5, 50 LB SK (100005050)							
7.76 Gal		FRESH WATER							
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
5	Displacement	Displacement	256	bbl	8.33			8	
Cement Left In Pipe									
Cement Left In Pipe		Amount	5 ft			Reason		Shoe Joint	
Mix Water:		pH ##	Mix Water Chloride: ## ppm			Mix Water Temperature: ## °F °C			
Cement Temperature: ## °F °C		Plug Displaced by: ## lb/gal kg/m3 XXXX			Disp. Temperature: ## °F °C				
Plug Bumped?		Yes/No	Bump Pressure: ##### psi MPa			Floats Held? Yes/No			
Cement Returns: ## bbl m3		Returns Density: ## lb/gal kg/m3			Returns Temperature: ## °F °C				
Comment									

2.0 Real-Time Job Summary

2.1 Job Event Log

Seq No.	Activity	Graph Label	Date	Time	Cmb Pump Rate (bbl/min)	Cmb Stg Total (bbl)	Dwnhole Density (ppg)	Pump A Pressure (psi)	Comments
1	Call Out	Call Out	12/14/2021	00:01:00					CREW CALLED OUT, REQUESTED ON LOCATION 06:00
2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/14/2021	03:30:00					PRE CONVOY SAFETY MEETING WITH ALL HES EE
3	Crew Leave Yard	Crew Leave Yard	12/14/2021	03:45:00					CREW DEPART YARD FOR LOCATION
4	Arrive At Loc	Arrive At Loc	12/14/2021	04:30:00					ARRIVE ON LOCATION, RECIEVED NUMBERS FROM CO REP, TD 11580, TP 11570, SJ 5, CSG 5.5 20#, PREV CSG 9 5/8 36# @ 1640, HOLE 7 7/8, MUD 9.3, TVD 6025, 210 CENTALIZERS, WATER TEST, TEMP 70, CHLORIDES 0, PH 7
5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/14/2021	04:45:00					SAFETY MEETING WITH ALL HES EE TO ASSESS ALL HAZARDS
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/14/2021	05:00:00					PRE RIG UP SAFETY MEETING WITH ALL HES EE
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/14/2021	07:15:00	0.00	0.00	-0.94	-46.69	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
8	Other	Other	12/14/2021	07:45:00	0.00	0.01	-0.95	-45.79	DECK ENGINE ON PUMP NOT STAYING RUNNING, TROUBLESHOOT ISSUE
9	Other	Other	12/14/2021	09:00:00	0.00	11.56	8.56	4.98	ISSUE ON PUMP REPAIRED READY TO PUMP

10	Start Job	Start Job	12/14/2021	09:15:51	0.00	11.74	8.51	15.15	START RECORDING DATA
11	Drop Bottom Plug	Drop Bottom Plug	12/14/2021	09:16:56	2.80	0.98	8.97	428.02	LAUNCH BOTTOM PLUG
12	Test Lines	Test Lines	12/14/2021	09:17:49	0.00	1.91	8.98	303.47	TEST LINES TO 5320 PSI
13	Pump Spacer 1	Pump Spacer 1	12/14/2021	09:20:47	0.00	0.00	8.86	194.56	PUMP 50 BBLS TUNED PRIME SPACER 11.5 PPG 7.5 BPM 800 PSI
14	Check Weight	Check Weight	12/14/2021	09:30:31	3.36	14.27	11.59	457.52	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
15	Check Weight	Check Weight	12/14/2021	09:34:15	5.64	38.85	11.96	390.29	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
16	Pump Cap Cement	Pump Cap Cement	12/14/2021	09:36:44	5.48	0.09	12.06	471.46	MIX AND PUMP 525 SKS 155 BBLS CAP CEMENT 13 PPG 1.66 FT3/SK, 8.29 GAL/SK 9 BPM 900 PSI, CALCULATED TOCC SURFACE
17	Check Weight	Check Weight	12/14/2021	09:38:46	5.54	11.33	12.84	468.78	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
18	Check Weight	Check Weight	12/14/2021	09:50:39	8.99	111.77	12.81	689.90	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
19	Pump Lead Cement	Pump Lead Cement	12/14/2021	09:54:37	8.92	0.07	12.59	609.59	MIX AND PUMP 430 SKS 119 BBLS LEAD CEMENT 13 PPG, 1.55 FT3/SK, 7.21 GAL/SK 9 BPM 1150 PSI, CALCULATED TOLC 2485
20	Check Weight	Check Weight	12/14/2021	09:58:00	9.00	30.39	12.77	1029.49	VERIFY WEIGHT ON PRESSURIZED MUD SCALES
21	Pump Tail Cement	Pump Tail Cement	12/14/2021	10:08:00	8.99	0.07	13.26	1157.73	MIX AND PUMP 575 SKS 163 BBLS TAIL CEMENT 13.2 PPG, 1.59 FT3/SK, 7.76 GAL/SK, 9 BPM 900 PSI, CALCULATED TOTC 6327
22	Shutdown	Shutdown	12/14/2021	10:30:44	0.00	167.74	13.62	83.95	SHUTDOWN, WASH PUMPS AND LINES TO TANK
23	Drop Top Plug	Drop Top Plug	12/14/2021	10:46:11	0.00	185.94	7.29	59.92	LAUNCH TOP PLUG
24	Pump Displacement	Pump Displacement	12/14/2021	10:46:14	0.00	0.00	7.29	60.42	PUMP 256 BBLS FRESH WATER DISPLACEMENT, FIRST 20 BBLS W/MMCR, 10 BPM 2650 PSI,

RECIEVED 50 BBLS TUNED PRIME SPACER AND 16
BBLS CEMENT TO SURFACE

25	Bump Plug	Bump Plug	12/14/2021	11:29:26	4.05	254.87	7.06	2510.06	BUMPED PLUG AT 2650 PSI TOOK TO 3160 PSI
26	Check Floats	Check Floats	12/14/2021	11:32:07	0.00	256.41	7.12	3058.15	FLOATS HELD TOOK 3 BBLS BACK TO TRUCK
27	End Job	End Job	12/14/2021	11:34:17	0.00	0.00	6.91	38.06	STOP RECORDING DATA
28	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/14/2021	11:37:00					PRE RIG DOWN SAFETY MEETING WITH ALL HES EE
29	Depart Location Safety Meeting	Depart Location Safety Meeting	12/14/2021	13:00:00					PRE DEPARTURE SAFETY MEETING WITH ALL HES EE
30	Crew Leave Location	Crew Leave Location	12/14/2021	13:30:00					THANK YOU FOR USING HALLIBURTON, KYLE BATH AND CREW

3.0 Attachments

3.1 Real Time iCem Job Chart

