

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Ft. Lupton District, COLORADO

State Pronghorn Fed 13-43-30HNB Production

Job Date: Saturday, December 04, 2021

Sincerely,

Meghan Van Zyl

Legal Notice

Disclaimer:

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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 Pronghorn Fed 13-43-30HNB 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 52 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 #: 9059005	Quote #: 0022895709	Sales Order #: 0907539859
Customer: EXTRACTION OIL & GAS-EBUS		Customer Rep: Todd Stephens	
Well Name: STATE PRONGHORN FEDERAL	Well #: 13-43-30HNB	API/UWI #: 05-123-51317-00	
Field: WATTENBERG	City (SAP): KERSEY	County/Parish: WELD	State: COLORADO
Legal Description: 30-5N-61W-2240FSL-596FWL			
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	11192ft	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	1600	0	1600
Casing		5.5	4.892	17			0	11162	0	6013
Open Hole Section			8.75				1600	11192	1600	6013

Tools and Accessories									
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make	
Guide Shoe	5.5			11162	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 ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Tuned Prime	TUNED PRIME CEMENT SPACER SYS	50	bbl	11.5	3.74			

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
2	Cap	SBM CEM ELASTICEM™ SYS	525	sack	13	1.66		8	8.3	
0.30 %		SCR-100, 1200 LB BAG - (1126328)								
8.30 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	FDP-C1371 SYS	SBM CEM FDP-C1371 SYS	415	sack	13	1.55		6	7.22	
7.22 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/mi n	Total Mix Fluid Gal	
4	ElastiCem	SBM CEM ELASTICEM™ SYS	560	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/mi n	Total Mix Fluid Gal	
5	Displacement	Displacement	248	bbl	8.33			8		
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	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
1	Call Out	Call Out	12/4/2021	08:00:00					CREW CALLED OUT, REQUESTED ON LOCATION 15:30
2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/4/2021	11:45:00					PRE CONVOY SAFETY MEETING WITH ALL HES EE
3	Crew Leave Yard	Crew Leave Yard	12/4/2021	12:00:00					CREW DEPART YARD FOR LOCATION
4	Arrive At Loc	Arrive At Loc	12/4/2021	13:40:00					ARRIVE ON LOCATION, RECIEVED NUMBERS FROM CO REP, TD 11192, TP 11162, SJ 5, CSG 5.5 20#, PREV CSG 9 5/8 36# @ 1615, HOLE 7 7/8, MUD 9.7, TVD 6025, 208 CENTALIZERS, WATER TEST, TEMP 50, CHLORIDES 0, PH 7
5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/4/2021	13:55:00					SAFETY MEETING WITH ALL HES EE TO ASSESS ALL HAZARDS
6	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	12/4/2021	14:10:00					PRE RIG UP SAFETY MEETING WITH ALL HES EE
7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/4/2021	19:30:00	0.00	0.00	7.00	0.00	PRE JOB SAFETY MEETING WITH RIG CREW AND CO REP
8	Start Job	Start Job	12/4/2021	20:10:12	7.85	0.00	-2.00	0.00	START RECORDING DATA
9	Drop Bottom Plug	Drop Bottom Plug	12/4/2021	20:10:19	8.35	0.00	-2.00	0.00	LAUNCH BOTTOM PLUG
10	Test Lines	Test Lines	12/4/2021	20:12:32	8.36	0.00	167.00	3.50	TEST LINES TO 4450 PSI

11	Pump Spacer 1	Pump Spacer 1	12/4/2021	20:15:01	8.39	0.00	7.00	3.60	PUMP 50 BBLS TUNED PRIME SPACER 11.5 PPG, 6 BPM 580 PSI
12	Pump Cap Cement	Pump Cap Cement	12/4/2021	20:24:38	12.90	5.80	487.00	1.10	MIX AND PUMP 525 SKS 155 BBLS CAP CEMENT 13 PPG, 1.66 FT3/SK, 8.3 GAL/SK 9 BPM 1100 PSI, CALCULATED TOCC SURFACE
13	Pump Lead Cement	Pump Lead Cement	12/4/2021	20:44:45	12.95	8.90	730.00	0.10	MIX AND PUMP 415 SKS 115 BBLS LEAD CEMENT 13 PPG, 1.55 FT3/SK, 7.22 GAL/SK 9 BPM 900 PSI, CALCULATED TOLC 2440
14	Pump Tail Cement	Pump Tail Cement	12/4/2021	20:59:16	12.76	7.10	518.00	0.10	MIX AND PUMP 560 SKS 159 BBLS TAIL CEMENT 13.2 PPG, 1.59 FT3/SK, 7.76 GAL/SK 9 BPM 780 PSI, CALCULATED TOTC 6149
15	Shutdown	Shutdown	12/4/2021	21:22:31	13.62	0.00	41.00	173.40	SHUTDOWN, WASH PUMPS AND LINES TO TANK
16	Drop Top Plug	Drop Top Plug	12/4/2021	21:30:22	8.45	2.90	32.00	187.30	LAUNCH TOP PLUG
17	Pump Displacement	Pump Displacement	12/4/2021	21:32:30	8.33	0.00	-6.00	188.00	PUMP 248 BBLS FRESH WATER DISPLACEMENT, FIRST 20 W/MMCR, 10 BPM 2600 PSI, RECIEVED 50 BBLS TUNED PRIME SPACER AND 52 BBLS CEMENT TO SURFACE
18	Bump Plug	Bump Plug	12/4/2021	22:07:48	8.51	0.00	2450.00	253.90	BUMPED PLUG AT 2140 PSI TOOK TO 2540 PSI
19	Check Floats	Check Floats	12/4/2021	22:09:48	8.50	0.00	2537.00	253.90	FLOATS HELD TOOK 2 BBLS BACK
20	End Job	End Job	12/4/2021	22:11:06	8.47	0.00	0.00	0.00	
21	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/4/2021	22:15:00					PRE RIG DOWN SAFETY MEETING WITH ALL HES EE
22	Depart Location Safety Meeting	Depart Location Safety Meeting	12/4/2021	23:00:00					PRE DEPARTURE SAFETY MEETING WITH ALL HES EE

23	Crew Leave Location	Crew Leave Location	12/4/2021	23:30:00
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THANK YOU FOR USING HALLIBURTON, KYLE BATH AND
CREW

3.0 Attachments

3.1 Real Time iCem Job Chart

