

# HALLIBURTON

iCem<sup>®</sup> Service

## **BONANZA CREEK ENERGY**

Date: March 21, 2014

**State Antelope 24-21-12HNC Intermediate**

Sincerely,  
**Derek Trier**

**Executive Summary**

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Halliburton appreciates the opportunity to perform the cementing services on the **State Antelope 24-21-12HNC** cement **Intermediate** 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. 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 [Ft. Lupton]**

## HALLIBURTON

## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 324725	Ship To #: 3283783	Quote #:	Sales Order #: 0901186866							
Customer: BONANZA CREEK ENERGY		Customer Rep:								
Well Name: STATE ANTELOPE	Well #: 24-21-12 HNC	API/UWI #: 05-123-38888-00								
Field: WATTENBERG	City (SAP): KER	County/Parish: WELD	State: COLORADO							
Legal Description: SE SW-12-5N-62W-350FSL-1389FWL										
Contractor:		Rig/Platform Name/Num: Cade 22								
Job BOM: 7522										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA\HX46524		Srv Supervisor: Joseph Barras								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	6850ft	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	410		
Casing		7	6.276	26		P-110	0	6850		
Open Hole Section			8.75				410	6850		
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make	
Guide Shoe	7	1		6850		Top Plug	7	1	HES	
Float Shoe	7	1				Bottom Plug	7	1	HES	
Float Collar	7	1				SSR plug set	7	1	HES	
Insert Float	7	1				Plug Container	7	1	HES	
Stage Tool	7	1				Centralizers	7	1	HES	
Miscellaneous Materials										
Gelling Agt		Conc		Surfactant		Conc	Acid Type		Qty	Conc
Treatment Fld		Conc		Inhibitor		Conc	Sand Type		Size	Qty
Fluid Data										
Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Mud Flush III (Powder)	Mud Flush III	20	bbl	8.4			6		
42 gal/bbl		FRESH WATER								

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
2	Lead Cement	ECONOCEM (TM) SYSTEM		Sack/Ton	12.5	1.89			10.25
10.25 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Tail Cement	EXPANDACEM (TM) SYSTEM		Sack/Ton	14.6	1.48			6.05
6.05 Gal		FRESH WATER							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
4	Displacement	Displacement	0	bbl	8.33				
Cement Left In Pipe		Amount	42 ft	Reason			Shoe Joint		
Comment									

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BONANZA CREEK ENERGY  
0901186866  
BONANZA CREEK STATE ANTELOPE 24-21-12 HNC

## 3.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)		Comment
Event	1	Start Job	Start Job	3/16/2014	09:59:47	COM4	8.37	0.00	-8.00		
Event	2	Test Lines	Test Lines	3/16/2014	10:04:33	COM4	8.35	0.00	16.00		TEST LINES TO 3500 PSI
Event	3	Pump Spacer 1	Pump Spacer 1	3/16/2014	10:04:41	COM4	8.32	0.00	43.00	10 BBL	RIG WATER
Event	4	Pump Spacer 1	Pump Spacer 1	3/16/2014	10:08:55	COM4	8.35	3.80	385.00	24 BBL	RIG WATER WITH MUD FLUSH
Event	5	Pump Spacer 1	Pump Spacer 1	3/16/2014	10:15:26	COM4	8.39	3.80	373.00	24 BBL	
Event	6	Pump Lead Cement	Pump Lead Cement	3/16/2014	10:18:02	COM4	8.42	3.80	405.00	172 BBL	520 SKS 12.5# 1.86 YIELD/10.25 GAL/SK
Event	7	Pump Tail Cement	Pump Tail Cement	3/16/2014	10:43:07	COM4	13.63	5.30	159.00	56 BBL	214 SKS 14.6# 1.48 YIELD /6.05 GAL/SK
Event	8	Shutdown	Shutdown	3/16/2014	10:58:16	COM4	13.37	0.00	-22.00		
Event	10	Drop Top Plug	Drop Top Plug	3/16/2014	10:58:27	COM4	13.37	0.00	-22.00		
Event	11	Pump Displacement	Pump Displacement	3/16/2014	10:58:35	COM4	13.34	0.00	-22.00	249 BBL	RIG WATER CEMENT TO SURFACE @ 235
Event	12	Bump Plug	Bump Plug	3/16/2014	11:50:04	COM4	9.79	0.00	2462.00	1688 PSI	
Event	13	Other	Other	3/16/2014	11:55:53	COM4	9.73	0.00	2569.00		CASINO TEST 2500 PSI FOR 5 MIN
Event	14	End Job	End Job	3/16/2014	12:04:41	COM4	9.70	0.00	3.00		