

HALLIBURTON

iCem[®] Service

BONANZA CREEK ENERGY RESOURCES, LLC

For:

Date: Thursday, January 15, 2015

State Seventy Holes F-J-4-HNB Surface

Case 1

Sincerely,
Derek Trier

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1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **State Seventy Holes F-J-4HNB** cement **Surface** 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 [Brighton]

Job Times			
	Date	Time	Time Zone
Called Out	1/15/2015	1300	MTN
On Location		1700	
Job Started		2026	
Job Completed		2140	
Departed Location		2230	

1.2 Cementing Job Summary

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Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 324725	Ship To #: 3463637	Quote #:	Sales Order #: 0902039499							
Customer: BONANZA CREEK ENERGY		Customer Rep:								
Well Name: STATE SEVENTY HOLES	Well #: F-J-4 HNB	API/UWI #: 05-123-39210-00								
Field: WATTENBERG	City (SAP): KERSEY	County/Parish: WELD	State: COLORADO							
Legal Description: NE NW-4-4N-62W-310FNL-1385FWL										
Contractor: FRONTIER DRLG		Rig/Platform Name/Num: FRONTIER 04								
Job BOM: 7521										
Well Type: HORIZONTAL OIL										
Sales Person: HALAMERICA/HB21661		Srvc Supervisor: JOE SCILEPPI								
Job										
Formation Name										
Formation Depth (MD)	Top	Bottom								
Form Type		BHST								
Job depth MD	444ft	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	STC	J-55	0	444		0
Open Hole Section			13.5				0	452		0
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	9.625			444	Top Plug	9.625		HES		
Float Shoe	9.625				Bottom Plug	9.625		HES		
Float Collar	9.625				SSR plug set	9.625		HES		
Insert Float	9.625				Plug Contalner	9.625		HES		
Stage Tool	9.625				Centralizers	9.625		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 ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Fresh Water Spacer	Mud Flush III	20	bbl	8.4			6		
42 gal/bbl		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	

last updated on 1/15/2015 10:26:35 PM

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Cementing Job Summary

2	Lead Cement	SWIFTCEM (TM) SYSTEM	200	sack	13.5	1.75		6	9.25	
9.25 Gal		FRESH WATER								
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	Displacement	Displacement	30.9	bbl	8.33			6		
Cement Left In Pipe		Amount	43 ft		Reason			Shoe Joint		
Mix Water: pH ##		Mix Water: ## ppm Chloride:			Mix Water Temperature: ## °F °C					
Cement Temperature: ## °F °C		Plug Displaced by: ## lb/gal kg/m ³ XXXX			Disp. Temperature: ## °F °C					
Plug Bumped? Yes/No		Bump Pressure: #### psi MPa			Floats Held? Yes/No					
Cement Returns: ## bbl m ³		Returns Density: ## lb/gal kg/m ³			Returns Temperature: ## °F °C					
Comment										

1.3 Planned Pumping Schedule

- 1. Fill Lines with Water**
 - a. Density = 8.33 lb/gal
 - b. Volume = 2 bbl
- 2. Pressure Test Lines to 3000psi**
- 3. Pump Mud Flush**
 - a. Density = 8.4 lb/gal
 - b. Volume = 20 bbl
 - c. Rate = 6.0 bpm
- 4. Pump EconoCem (Lead)**
 - a. Density = 12.5 lb/gal
 - b. Yield = 1.75 ft³/sk
 - c. Water Requirement = 9.25 gal/sk
 - d. Volume = 200 sks (62.34 bbls)
 - e. Rate = 6.0 bpm
- 5. Drop Top Plug**
- 6. Start Displacement**
- 7. Pump Displacement Water**
 - a. Density = 8.33 lb/gal
 - b. Volume = 30.89 bbls
 - c. Rate = 6.0 bpm

Calculated Total Displacement = 30.89 bbls

1.4 Job Overview

		Units	Description
1	Surface temperature at time of job	°F	25
2	Mud type (OBM, WBM, SBM, Water, Brine)	-	WBM
3	Actual mud density	lb/gal	8.8
4	Time circulated before job	HH:MM	00:30
5	Mud volume circulated	Bbls	
6	Rate at which well was circulated	Bpm	
7	Pipe movement during hole circulation	Y/N	N
8	Rig pressure while circulating	Psi	
9	Time from end mud circulation to start of job	HH:MM	00:30
10	Pipe movement during cementing	Y/N	N
11	Calculated displacement	Bbls	30.89
12	Job displaced by	Rig/HES	HES
13	Annular before job)?	Y/N	Y
14	Annular flow after job	Y/N	N
15	Length of rat hole	Ft	8
16	Units of gas detected while circulating	Units	
17	Was lost circulation experienced at any time ?	Y/N	N

1.5 Water Field Test

Item	Recorded Test Value	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit
pH	7	----	6.0 - 8.0	Chemicals in the water can cause severe retardation
Chlorides	0	ppm	3000 ppm	Can shorten thickening time of cement
Sulfates	<200	ppm	1500 ppm	Will greatly decrease the strength of cement
Total Hardness		ppm	500 mg/L	High concentrations will accelerate the set of the cement
Calcium		ppm	500 ppm	High concentrations will accelerate the set of the cement
Total Alkalinity		ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all (typically occurs @ pH ≥ 8.3).
Bicarbonates		ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all
Potassium		ppm	5000 ppm	High concentrations will shorten the pump time of cement (indicates the presence of chlorides, therefore if Potassium levels are measured as high, so should the chlorides)
Iron	0	ppm	300 ppm	High concentrations will accelerate the set of the cement
Temperature	44.4	°F	50-80 °F	High temps will accelerate; Low temps may risk freezing in cold weather

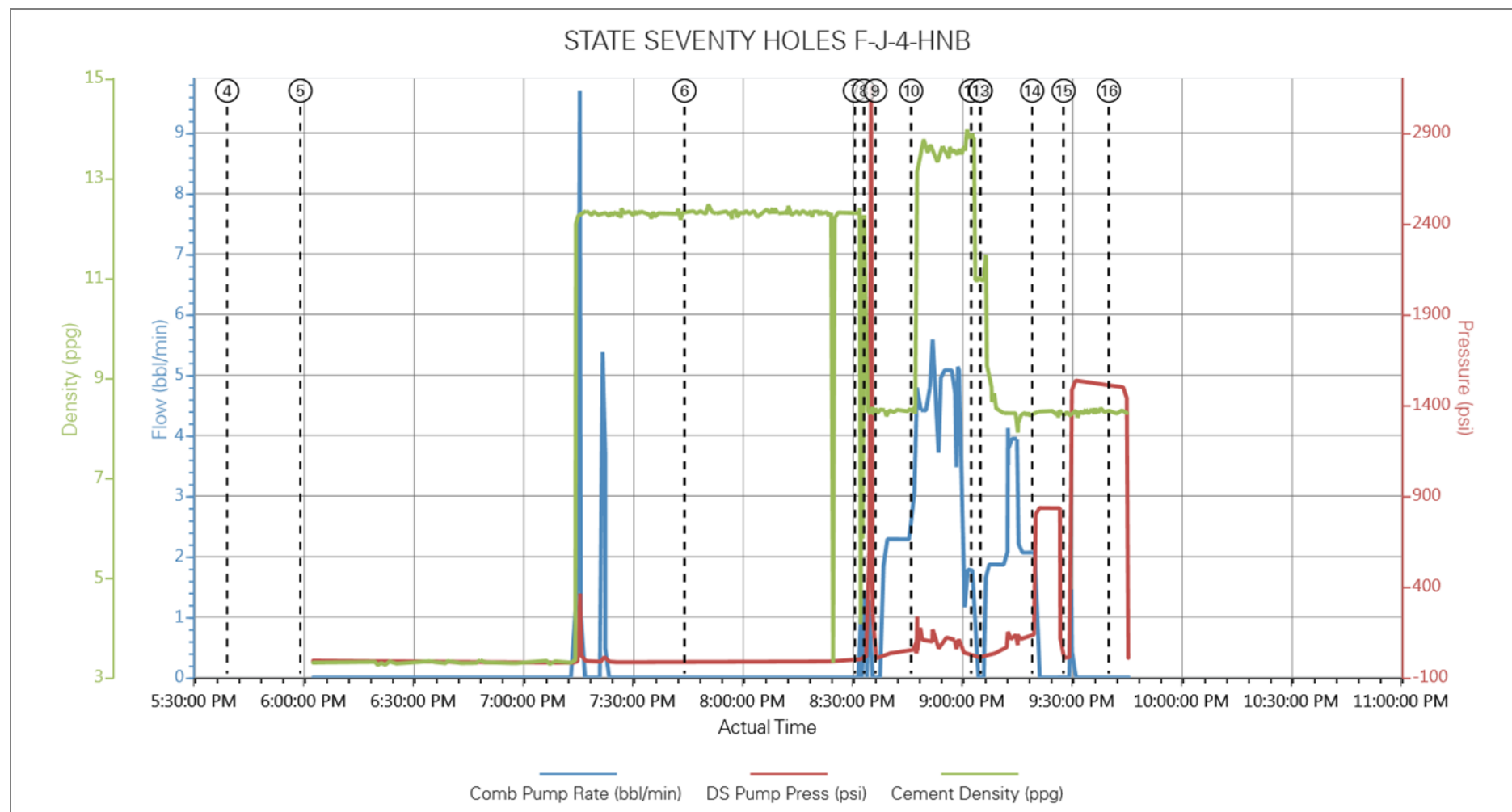
Submitted Respectfully by: _____

1.6 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Density (ppg)	Comment
Event	1	Call Out	Call Out	1/15/2015	13:00:00	USER				
Event	2	Crew Leave Yard	Crew Leave Yard	1/15/2015	15:15:00	USER				
Event	3	Arrive At Loc	Arrive At Loc	1/15/2015	17:00:00	USER				RIG WAS RIGGING UP CAASING CREW UPON ARRIVAL
Event	4	Rig-up Lines	Rig-up Lines	1/15/2015	17:40:00	USER				
Event	5	Rig-Up Completed	Rig-Up Completed	1/15/2015	18:00:00	USER				
Event	6	Pre-Job Safety Meeting	Pre-Job Safety Meeting	1/15/2015	19:45:00	USER	0.00	-12.31	12.26	JSA W/ ALL INVOLVED PERSONNEL
Event	7	Start Job	Start Job	1/15/2015	20:31:34	COM5	0.00	-0.98	12.35	
Event	8	Test Lines	Test Lines	1/15/2015	20:34:02	COM5	0.00	10.75	8.24	TESTED LINES TO 3000 PSI NO VISIBLE LEAKS
Event	9	Pump Spacer 1	Pump Spacer 1	1/15/2015	20:37:09	COM5	0.00	6.84	8.39	PUMPED 20 BBLS WATER SPACER, PUMPED AT 2.3BPM AT38PSI
Event	10	Pump Cement	Pump Cement	1/15/2015	20:46:57	COM5	3.04	56.67	8.27	MIXED 200 SKS OR 62.3BBLS AT 13.5 PPG W/ FRESH WATER AT 5BPM AT 110PSI
Event	11	Shutdown	Shutdown	1/15/2015	21:03:20	COM5	0.00	12.70	10.95	
Event	12	Drop Top Plug	Drop Top Plug	1/15/2015	21:05:52	COM5	0.00	11.73	10.94	PLUG PRE LOADED WITNESSED BY COMPANY REP
Event	13	Pump Displacement	Pump Displacement	1/15/2015	21:05:55	COM5	0.00	11.73	10.99	PUMPED 30.9BBLS FRESH WATER, CMT CAME TO SURFACE AT 14.5BBLS AWAY LEAVING US WITH 16.4BBLS BACK
Event	14	Bump Plug	Bump Plug	1/15/2015	21:20:02	COM5	0.00	839.34	8.32	PLUG LANDED AT 146 PSI
Event	15	Pressure Up Well	Pressure Up Well	1/15/2015	21:28:37	COM5	0.00	7.82	8.32	15MIN, 1500PSI CASING TEST
Event	16	End Job	End Job	1/15/2015	21:41:00	USER	0.00	1505.73	8.37	

2.0 Custom Graphs

2.1 Custom Graph



STATE SEVENTY HOLES F-J-4-HNB

