



# Bonanza Creek Energy

Pronghorn U-Y-18HNB

API # 05-123-45065

## Production

12/19/2018

Quote #: 22963

Execution #: 13218



## Bonanza Creek Energy

Attention: Mr. Adam Conry | (303) 883.3351 | [AConry@bonanzacrk.com](mailto:AConry@bonanzacrk.com)

Bonanza Creek Energy | 410 17th St Suite 1400 | Denver, CO. 80202

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Dear Mr. Adam Conry,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,  
Gage Putnam  
Field Engineer I | (307) 887-4243 | [Gage.Putnam@bjservices.com](mailto:Gage.Putnam@bjservices.com)

Field Office 1716 East Allison Rd., Cheyenne WY, 82007  
Phone: (307) 638-5585

Sales Office 999 18th St. Suite 1200 Denver, CO 80202  
Phone: (281) 408-2361

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# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Travis Tolman	FORMATION	NIOBRARA
DISTRICT	Cheyenne, WY	RIG	Akita 520
SERVICE	Cementing	COUNTY	WELD
		STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Previous Casing	9.63	8.92	36.00	1,601.00	1,601.00	
Open Hole	0.00	8.50	0.00	10,927.00	6,048.00	7.00
Casing	5.50	4.89	17.00	10,917.00	6,048.00	

## HARDWARE

Top Plug Used?	Yes	Tool Type	Float Collar
Top Plug Provided By	Non BJ	Tool Depth (ft)	10,874.00
Top Plug Size	5.500	Max Casing Pressure - Rated (psi)	10640.00
Centralizers Used	Yes	Max Casing Pressure - Operated (psi)	5500.00
Centralizers Quantity	105.00	Pipe Movement	None
Centralizers Type	Rigid	Job Pumped Through	Manifold
Landing Collar Depth (ft)	10,874	Top Connection Thread	LTC
		Top Connection Size	5.5

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	YP Mud In	4
Circulation Prior to Job	Yes	Solids Present at End of Circulation	No
Circulation Time (min)	150.00	10 sec SGS	4
Circulation Rate (bpm)	8.30	10 min SGS	5
Lost Circulation Prior to Cement Job	No	30 min SGS	7
Mud Density In (ppg)	9.60	Flare Prior to / during the Cement Job	No
PV Mud In	12	Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	23.00	Mix Water Temperature (°F)	62.00
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## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> O REQ (gals/sk)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	12.0000					60.0000
Lead Slurry	BJCem P100.3.01C	12.5000	2.1538	12.23	590	1263.0000	225.9000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4772	7.45	990	1464.0000	259.1000
Displacement 2	Retarded Water	8.3337			0	0.0000	20.0000
Displacement Final	Displacement Final (Water)	8.3308				0.0000	232.7000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	RETARDER, R-31	0.5000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	WEIGHTING ADDITIVE, W-11	243.3100	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-267	1.0000	GPB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	EXTENDER, BENTONITE	4.0000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.4000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, BA-60	0.4000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraSeal POLI	0.1300	LBS/SK
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-24	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.0700	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Displacement 2	Retarded Water	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water	RETARDER, R-8L	0.5000	GPB
Displacement Final	Displacement Final (Water)	BIOCIDE, BIOC11139W	0.0100	GPB

#### DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	72.00
Calculated Displacement Vol (bbls)	252.70	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	252.00	Amt of Spacer to Surface	60.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	1.50
Bump Plug Pressure (psi)	2652.00	Total Volume Pumped (bbls)	819.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

# BJ Cementing Event Log

Long String - Cheyenne, WY

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	12/18/2018 15:00	Callout					Crew called for on location of 2100
2	12/18/2018 17:00	Depart for Location					Crew ready to leave for location
3	12/18/2018 17:58	Arrive on Location					Arrived on location, running casing, met with company man to get numbers, discuss job and safety issues
4	12/19/2018 00:30	Spot Units					Spot equipment
5	12/19/2018 00:45	STEACS Briefing					Held safety meeting with crew to discuss rig up and safety issues
6	12/19/2018 01:00	Rig Up					Rigged up from equipment to rig floor
7	12/19/2018 02:15	STEACS Briefing					Held safety meeting with company man, tool hand, rig hands and crew to discuss job and safety
8	12/19/2018 02:50	Pump Spacer	8.3000	2.30	3.00	145.00	Load pump and lines with fresh water
9	12/19/2018 02:53	Pressure Test	8.3000			6797.00	Pressure test pump and lines with fresh water
10	12/19/2018 03:05	Pump Spacer	11.0000	5.10	20.00	250.00	Pump 20bbls of spacer at 11#-2.21Y-12.92gps with chemicals
11	12/19/2018 03:09	Pump Spacer	12.0000	5.10	20.00	221.00	Pump 20bbls of spacer at 12#-1.61Y-8.40gps with chemicals
12	12/19/2018 03:13	Pump Spacer	11.0000	5.10	20.00	221.00	Pump 20bbls of spacer at 11#-2.21Y-12.92gps with chemicals
13	12/19/2018 03:23	Pump Lead Cement	12.5000	6.30	225.00	450.00	Pump 590sks/225.9bbls of lead cement at 12.5#-2.15Y-12.23gps
14	12/19/2018 04:04	Pump Tail Cement	13.5000	6.30	259.00	602.00	Pump 990sks/259.1bbls of tail cement at 13.5#-1.47Y-7.45gps, top of tail calculated at 4099'
15	12/19/2018 05:01	End Pumping					Shut down and wash pump and lines
16	12/19/2018 05:14	Pump Displacement	8.3000	5.00	10.00	94.00	Pump 10bbl wet shoe with R-8, shut down
17	12/19/2018 05:17	Drop Top Plug					Drop top plug witnessed by company man, tool hand and BJ rep
18	12/19/2018 05:18	Pump Displacement	8.3000	7.40	230.00	2202.00	Pump fresh water displacement, first 10bbls with R-8, rest with chemicals
19	12/19/2018 05:55	Other (See comment)	8.3000	4.00	22.00	1998.00	Slowed rate to land plug
20	12/19/2018 05:59	Land Plug				2652.00	Landed plug, got 72bbls of cement to surface and 60bbls of spacer
21	12/19/2018 06:01	Other (See comment)	8.3000	1.20	2.00	4715.00	Pressure up to shift sleeve
22	12/19/2018 06:03	Pump Displacement	8.3000	5.00	8.00	2049.00	Pump 10bbl wet shoe
23	12/19/2018 06:05	End Pumping				1668.00	Shut down
24	12/19/2018 06:06	Check Floats					Check float, held, got 1.5bbls back
25	12/19/2018 06:15	STEACS Briefing					Held safety meeting with crew to discuss rig down and safety
26	12/19/2018 06:30	Rig Down					Rigged down from rig floor to equipment
27	12/19/2018 07:30	Leave Location					Crew ready to leave location

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Client: Bonanza Creek Energy

Well: Pronghorn U-Y-18HNB

Well 05-123-45065

API:



Plan #: ORD-13218-G1T6Z6

Execution #: EXC-13218-G1T6Z602

Quote #: QUO-22963-X1L7K1



**JobMaster Program Version 4.02C1**  
**Job Number: 12033**  
**Customer: Bonanza Creek**  
**Well Name: Pronghorn U-Y-18HNB**

