



# Bonanza Creek Energy

Antelope E14-20-17XRLNC

API # 05-123-48965

## Production

01/11/2019

Quote #: 25368

Execution #: 14754



# 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 519
SERVICE	Cementing	COUNTY	WELD
		STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Open Hole	0.00	8.50	0.00	16,465.00	6,451.00	7.00
Casing	5.50	4.89	17.00	16,455.00	6,451.00	
Previous Casing	9.63	8.92	36.00	1,606.00	1,606.00	

## HARDWARE

Bottom Plug Used?	No	Tool Type	Float Collar
Top Plug Used?	Yes	Tool Depth (ft)	16,431.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	10640.00
Top Plug Size	5.500	Max Casing Pressure - Operated (psi)	5000.00
Centralizers Used	Yes	Pipe Movement	None
Centralizers Quantity	148.00	Job Pumped Through	Manifold
Centralizers Type	Rigid	Top Connection Thread	LTC
Landing Collar Depth (ft)	16,431	Top Connection Size	5.5

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	YP Mud In	15
Circulation Prior to Job	Yes	Solids Present at End of Circulation	No
Circulation Time (min)	150.00	10 sec SGS	4
Circulation Rate (bpm)	8.00	10 min SGS	8
Lost Circulation Prior to Cement Job	No	30 min SGS	11
Mud Density In (ppg)	9.30	Flare Prior to / during the Cement Job	No
PV Mud In	9	Gas Present	No

## TEMPERATURE

Ambient Temperature (°F)	37.00	Flow Line Temperature (°F)	253.00
Mix Water Temperature (°F)	85.00		

## 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 II	12.0000					80.0000
Lead Slurry	BJCem P100.3.01C	12.5000	2.1538	12.23	590	1264.0000	225.9000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4772	7.45	1910	2818.0000	500.0000
Displacement 2	Retarded Water	8.3337			0	0.0000	20.0000
Displacement Final	Displacement Final (Water)	8.3308				0.0000	361.9000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	243.6000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraSeal POLI	0.1300	LBS/SK
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, BA-60	0.4000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.4000	BWOB
Lead Slurry	BJCem P100.3.01C	EXTENDER, BENTONITE	4.0000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-24	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.0700	BWOB
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	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Displacement 2	Retarded Water	RETARDER, R-8L	0.5000	GPB
Displacement 2	Retarded Water	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Displacement Final (Water)	BIOCIDE, BIOC11139W	0.0100	GPB

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ
Calculated Displacement Vol (bbls)	381.90
Actual Displacement Vol (bbls)	375.00
Did Float Hold?	Yes
Bump Plug	Yes
Bump Plug Pressure (psi)	3014.00
Were Returns Planned at Surface	Yes
Cement Returns During Job	Full

Amt of Cement Returned / Reversed	75.00
Method Used to Verify Returns	Visual
Amt of Spacer to Surface	80.00
Pressure Left on Casing (psi)	0.00
Amt Bled Back After Job	2.50
Total Volume Pumped (bbls)	1203.00
Top Out Cement Spotted	No
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	01/11/2019 00:00	Callout					Crew called out for on location of 0700, pre-trip equipment for job
2	01/11/2019 03:05	Depart for Location					Crew ready to leave for location
3	01/11/2019 05:30	Arrive on Location					Arrived on location, landing joint going up, met with company man to get numbers, discuss job and safety issues
4	01/11/2019 05:45	Spot Units					Spot equipment
5	01/11/2019 06:00	STEACS Briefing					Held safety meeting with crew to discuss rig up, job tasks and safety
6	01/11/2019 06:15	Rig Up					Rigged up from equipment to rig floor
7	01/11/2019 08:45	STEACS Briefing					Held safety meeting with company man, rig hands, tool hand and crew to discuss job and safety
8	01/11/2019 09:22	Pump Spacer	8.3000	2.50	3.00	120.00	Load pump and lines with fresh water
9	01/11/2019 09:25	Pressure Test	8.3000			5909.00	Pressure test pump and lines
10	01/11/2019 09:32	Pump Spacer	11.0000	3.70	26.00	247.00	Pump spacer at 11# with chemicals
11	01/11/2019 09:39	Pump Spacer	12.0000	3.70	28.00	170.00	Pump spacer at 12# with chemicals
12	01/11/2019 09:47	Pump Spacer	11.0000	3.70	26.00	120.00	Pump spacer at 11# with chemicals
13	01/11/2019 10:02	Pump Lead Cement	12.5000	6.20	225.00	399.00	Pump lead cement at 12.5#-2.15Y-12.23gps
14	01/11/2019 10:41	Pump Tail Cement	13.5000	7.40	500.00	831.00	Pump tail cement at 13.5#-1.47Y-7.45gps, top of tail calculated at 4213'
15	01/11/2019 11:53	End Pumping					Shut down
16	01/11/2019 11:55	Other (See comment)	8.3000	5.00	10.00	221.00	Pump fresh water with R-8 for wet shoe ahead of plug
17	01/11/2019 11:57	End Pumping					Shut down
18	01/11/2019 12:10	Drop Top Plug					Drop top plug witnessed by company man, tool hand and BJ rep
19	01/11/2019 12:15	Pump Displacement	8.3000	7.40	360.00	2582.00	Pump fresh water displacement, 1st 10bbls with R-8, rest with Biocide
20	01/11/2019 13:06	Other (See comment)	8.3000	5.00	17.00	2300.00	Slowed rate to land plug
21	01/11/2019 13:08	Land Plug				3014.00	Land plug, calculated displacement 381.9bbls, actual displacement 375bbls, got 75bbls of cement to surface, hold for 5mins
22	01/11/2019 13:13	Other (See comment)	8.3000	2.00	2.50	4819.00	Pressure up to shift sleeve
23	01/11/2019 13:15	Other (See comment)	8.3000	5.00	7.50	2405.00	Pump total of 10bbls for wet shoe
24	01/11/2019 13:17	End Pumping				1846.00	Shut down, hold for 2mins
25	01/11/2019 13:20	Check Floats					Check float, held, got 2.5bbls back

26	01/11/2019 13:30	STEACS Briefing					Held safety meeting with crew to discuss rig down and safety
27	01/11/2019 13:45	Rig Down					Rigged down from rig floor to equipment
28	01/11/2019 16:00	Leave Location					Crew ready to leave location



JobMaster Program Version 4.02C1

Job Number:

Customer: Bonanza Creek

Well Name: Antelope #e14-20-17XRLNC

