



# Bonanza Creek Energy

Antelope Federal Y44-U41-20HNB

API # 05-123-49095

## Production

4/30/2019

Quote #: 30358

Execution #: 17655



## 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	Roger Acuna	FORMATION	NIOBRARA
CLIENT FIELD REPRESENTATIVE	Kenneth Graham	RIG	Akita 519
DISTRICT	Cheyenne, WY	COUNTY	WELD
SERVICE	Cementing	STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	ID (in)	OD (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Open Hole	8.50	0.00	0.00	12,736.00	6,367.00	7.00
Previous Casing	8.92	9.63	36.00	1,623.00	1,623.00	
Casing	4.78	5.50	20.00	12,726.00	6,367.00	

## HARDWARE

Bottom Plug Used?	Yes	Landing Collar Depth (ft)	12,684
Bottom Plug Provided By	Non BJ	Tool Type	Float Collar
Bottom Plug Size	5.500	Tool Depth (ft)	12,684.00
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	11080.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	4700.00
Top Plug Size	5.500	Pipe Movement	None
Centralizers Used	Yes	Job Pumped Through	Manifold
Centralizers Quantity	121.00	Top Connection Thread	BTC
Centralizers Type	Rigid	Top Connection Size	5.5

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	YP Mud In	3
Circulation Prior to Job	Yes	YP Mud Out	3
Circulation Time (min)	150.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	8.50	10 sec SGS	4
Circulation Volume (bbls)	1275.00	10 min SGS	7
Lost Circulation Prior to Cement Job	No	30 min SGS	11
Mud Density In (ppg)	9.60	Flare Prior to / during the Cement Job	Yes
Mud Density Out (ppg)	9.60	Gas Present	Yes
PV Mud In	14	Gas Units	5825
PV Mud Out	14		

Client Name: Bonanza Creek Energy

Well: ANTELOPE FEDERAL #Y44-U41-20HNB

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Start Date: 4/30/2019

End Date: 4/30/2019



## TEMPERATURE

Ambient Temperature (°F)	40.00	Slurry Cement Temperature (°F)	50.00
Mix Water Temperature (°F)	50.00	Flow Line Temperature (°F)	140.00

## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> O REQ (gals/sk)	PLN TOP FLD (ft)	LENGTH (ft)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.0000			0.00				20.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	12.0000			0.00				20.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.0000			0.00				20.0000
Lead Slurry	BJCem P100.3.01C	12.5000	2.1529	12.23	0.00	5,000.00	590	1263.0000	224.9000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4770	7.45	5,000.00	7,751.00	1290	1906.0000	339.3000
Displacement 2	Retarded Water	8.3337			13,244.00	0.00	0	0.0000	20.0000
Displacement Final	Displacement Final (Water)	8.3308			0.00			0.0000	267.0000

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FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
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	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	243.3100	PPB
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	EXTENDER, BENTONITE	4.0000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraSeal POLI	0.1300	LBS/SK
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	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
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	0.0500	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
Displacement 2	Retarded Water	RETARDER, SR-61L	0.1000	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	Amt of Cement Returned / Reversed	25.00
Calculated Displacement Vol (bbls)	287.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	287.00	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	3.00
Bump Plug Pressure (psi)	2500.00	Total Volume Pumped (bbls)	915.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

Client Name: Bonanza Creek Energy

Well: ANTELOPE FEDERAL #Y44-U41-20HNB

Well API: 05-123-49095

Start Date: 4/30/2019

End Date: 4/30/2019



# BJ Cementing Event Log

Long String - Cheyenne, WY - Roger Acuna

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	04/30/2019 00:00	Callout					CALLED OUT RTS 0800
2	04/30/2019 05:00	Depart for Location					DEPART CHEYENNE WY CAMP
3	04/30/2019 06:00	Arrive on Location					ARRIVE TO LOCATION, CHECK IN WITH COMPANY MAN
4	04/30/2019 07:00	STEACS Briefing					STEACS RIG UP
5	04/30/2019 07:15	Rig Up					RIG UP IRON AND HOSES
6	04/30/2019 08:00	Rig					WAITING ON RIG TO RIH AND CIRCULATE
7	04/30/2019 10:15	STEACS Briefing					PRE JOB SAFETY MEETING TO DISCUSS JOB PROCEDURES
8	04/30/2019 10:38	Pump Spacer	8.4000	3.00	3.00	250.00	FILL LINES 3BBLS FRESH WATER
9	04/30/2019 10:39	Pressure Test				5000.00	PRESSURE TEST LINES
10	04/30/2019 10:49	Pump Spacer	11.0000	5.00	20.00	350.00	PUMP 20BBLS INTEGRAGUARD SPACER W/SURFACTANT @ 11PPG
11	04/30/2019 10:54	Pump Spacer	12.0000	5.00	20.00	350.00	PUMP 20BBLS INTEGRAGUARD SPACER W/SURFACTANT @ 12PPG
12	04/30/2019 10:59	Pump Spacer	11.0000	5.00	20.00	350.00	PUMP 20BBLS INTEGRAGUARD SPACER W/SURFACTANT @ 11PPG
13	04/30/2019 11:04	Pump Lead Cement	12.5000	6.00	225.00	400.00	PUMP 225BBLS BJCEM P100.3.01C @ 12.5PPG (590SKS 2.15YLD 12.23GPS)
14	04/30/2019 11:37	Pump Tail Cement	13.5000	6.00	340.00	350.00	PUMP 340BBLS BJCEM P50.6.02C @ 13.5PPG (1290SKS 1.48YLD 7.45GPS) CALCULATED TOP 4417'
15	04/30/2019 12:36	End Pumping					SHUTDOWN
16	04/30/2019 12:38	Wash Pumps and Lines					WASH PUMPS AND LINES TO THE PIT
17	04/30/2019 12:44	Pump Displacement	8.4000	3.00	2.00		PUMP 2BBLS WATER W/SR-61L
18	04/30/2019 12:45	Drop Bottom Plug					DROP BOTTOM PLUG
19	04/30/2019 12:46	Pump Displacement	8.4000	3.00	3.00		PUMP 3BBLS WATER W/SR-61L

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Client: Bonanza Creek Energy

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Plan #: ORD-17655-T0B6P8

Execution #: EXC-17655-T0B6P802

Quote #: QUO-30358-J0P1Y7

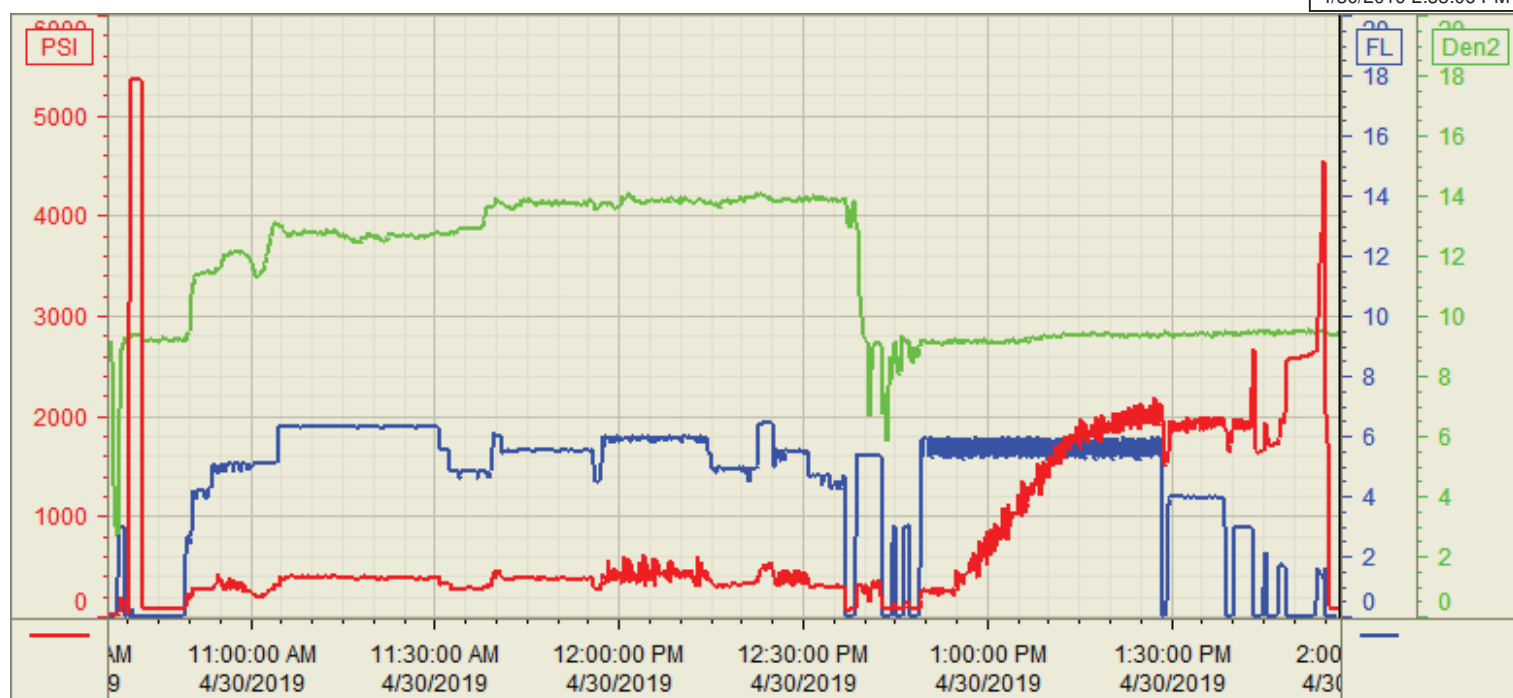
20	04/30/2019 12:47	Drop Top Plug					DROP TOP PLUG
21	04/30/2019 12:48	Pump Displacement	8.4000	6.00	225.00	2400.00	PUMP 282BBLS FRESH WATER DISPLACEMENT W/BIOCID
22	04/30/2019 13:24	Spacer Back-to-Surface					SPACER TO SURFACE @ 200BBLS INTO DISPLACEMENT
23	04/30/2019 13:28	Pump Displacement	8.4000	4.00	35.00	2000.00	SLOW RATE DUE TO PRESSURES
24	04/30/2019 13:37	Cement Back-to-Surface					CEMENT TO SURFACE @ 262BBLS INTO DISPLACEMENT
25	04/30/2019 13:38	Pump Displacement	8.4000	3.00	22.00	2000.00	SLOW RATE TO LAND PLUG
26	04/30/2019 13:43	Land Plug				2500.00	LANDED BOTTOM PLUG BURST DISK @ 2500PSI
27	04/30/2019 13:48	Land Plug				2500.00	LANDED TOP PLUG HELD FOR 5MIN THEN BURST DISK @ 4700PSI
28	04/30/2019 13:54	Check Floats					CHECK FLOATS, FLOATS HELD GETTING 1.5BBLS BACK TO THE PUMP
29	04/30/2019 13:55	End Pumping					END JOB
30	04/30/2019 14:00	STEACS Briefing					STEACS RIG DOWN
31	04/30/2019 14:15	Rig Down					RIG DOWN IRON AND HOSES
32	04/30/2019 15:00	Leave Location					DEPART LOCATION

Customer: Bonanza Creek  
Well Number: Y44-U41-20HNB  
Lease Info: Antelope Federal



Print Date/Time

4/30/2019 2:33:06 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	73.8	4/30/2019 1:57:25 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH Density (PPG)		4/30/2019 1:57:22 PM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Combined pump rate		4/30/2019 1:57:22 PM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 2:33:06 PM