



Bonanza Creek Energy

Antelope Federal 44-20-17XRLNC

API # 05-123-49090

Production

05/06/2019

Quote #: 30335

Execution #: 17740



Bonanza Creek Energy

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

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

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

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

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 (%)
Previous Casing	8.92	9.63	36.00	1,627.00	1,627.00	
Open Hole	8.50	0.00	0.00	17,163.00	6,407.00	7.00
Casing	4.78	5.50	20.00	17,152.00	6,407.00	

HARDWARE

Bottom Plug Used?	Yes	Landing Collar Depth (ft)	17,105
Bottom Plug Provided By	Non BJ	Tool Type	Float Collar
Bottom Plug Size	5.500	Tool Depth (ft)	17,105.00
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	11080.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	5100.00
Top Plug Size	5.500	Pipe Movement	None
Centralizers Used	Yes	Job Pumped Through	Manifold
Centralizers Quantity	175.00	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)	210.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	10.00	10 sec SGS	4
Circulation Volume (bbls)	2100.00	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	7000
PV Mud Out	14		

Client Name: Bonanza Creek Energy Well: ANTELOPE FEDERAL #44-20-17XRLNC Well API: 05-123-49090

Start Date: 5/6/2019 End Date: 5/6/2019



TEMPERATURE

Ambient Temperature (°F)	50.00
Mix Water Temperature (°F)	50.00

Slurry Cement Temperature (°F)	50.00
Flow Line Temperature (°F)	140.00

FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H ₂ 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				26.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	12.0000			0.00				28.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.0000			0.00				26.0000
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	12,158.00	2020	2986.0000	531.7000
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	360.0000

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FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	243.3100	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	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
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	EXTENDER, BENTONITE	4.0000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, BA-60	0.4000	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
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	IntegraGuard GW-86	0.1000	BWOB
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	CEMENT, CLASS G	50.0000	PCT
Displacement 2	Retarded Water	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water	RETARDER, SR-61L	0.1000	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	70.00
Calculated Displacement Vol (bbls)	385.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	385.00	Amt of Spacer to Surface	80.00
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)	2700.00	Total Volume Pumped (bbls)	1225.00
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 #44-20-17XRLNC

Well API: 05-123-49090

Start Date: 5/6/2019

End Date: 5/6/2019



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	05/06/2019 00:00	Callout					CALLED OUT RTS 0400
2	05/06/2019 01:30	Depart for Location					DEPART TRUCK STOP KERSEY CO
3	05/06/2019 02:30	Arrive on Location					ARRIVE TO LOCATION, CHECK IN WITH COMPANY MAN
4	05/06/2019 02:45	STEACS Briefing					STEACS RIG UP
5	05/06/2019 03:00	Rig Up					RIG UP IRON AND HOSES
6	05/06/2019 04:00	Rig					WAITING ON RIG TO RIH W/CASING AND CIRCULATE
7	05/06/2019 09:00	STEACS Briefing					PRE JOB SAFETY MEETING TO DISCUSS JOB PROCEDURES
8	05/06/2019 09:25	Pump Spacer	8.4000	3.00	3.00	150.00	FILL LINES 3BBLS FRESH WATER
9	05/06/2019 09:28	Pressure Test				5000.00	PRESSURE TEST LINES
10	05/06/2019 09:32	Pump Spacer	11.0000	4.50	26.00	200.00	PUMP 26BBLS INTEGRAGUARD SPACER @ 11PPG W/SURFACTANT
11	05/06/2019 09:38	Pump Spacer	12.0000	4.50	28.00	200.00	PUMP 28BBLS INTEGRAGUARD SPACER @ 12PPG W/SURFACTANT
12	05/06/2019 09:45	Pump Spacer	11.0000	4.50	26.00	200.00	PUMP 26BBLS INTEGRAGUARD SPACER @ 11PPG W/SURFACTANT
13	05/06/2019 09:53	Pump Lead Cement	12.5000	5.00	225.00	250.00	PUMP 225BBLS BJCEM P100.3.01C @ 12.5PPG (590SKS 2.15YLD 12.23GPS)
14	05/06/2019 10:42	Pump Tail Cement	13.5000	6.00	532.00	500.00	PUMP 532BBLS BJCEM P50.6.02C @ 13.5PPG (2020SKS 1.48YLD 7.45GPS) CALCULATED TOP 4137'
15	05/06/2019 12:13	End Pumping					SHUTDOWN
16	05/06/2019 12:15	Wash Pumps and Lines					WASH PUMPS AND LINES TO THE PIT
17	05/06/2019 12:23	Pump Displacement	8.4000	3.00	2.00	0.00	PUMP 2BBLS FRESH WATER W/SR-61L
18	05/06/2019 12:25	Drop Bottom Plug					DROP BOTTOM PLUG
19	05/06/2019 12:26	Pump Displacement	8.4000	3.00	3.00	0.00	PUMP 3BBLS FRESH WATER W/SR-61L
20	05/06/2019 12:27	Drop Top Plug					DROP TOP PLUG
21	05/06/2019 12:28	Pump Displacement	8.4000	6.00	150.00	2200.00	PUMP 380BBLS FRESH WATER DISPLACEMENT W/BIOCIDE
22	05/06/2019 12:56	Pump Displacement	8.4000	4.00	230.00	2000.00	SLOW RATE DUE TO PRESSURES
23	05/06/2019 13:02	Spacer Back-to-Surface					SPACER TO SURFACE @ 230BBLS INTO DISPLACEMENT

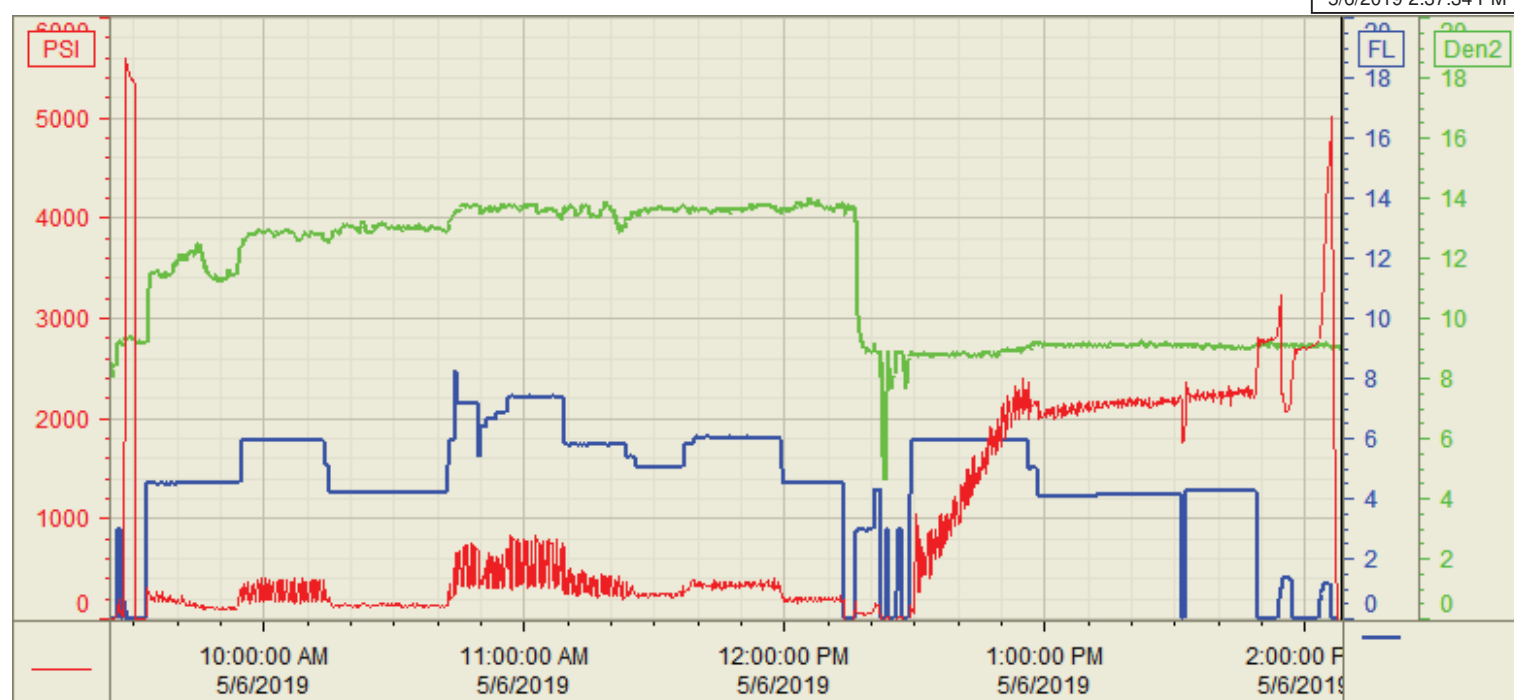
24	05/06/2019 13:30	Cement Back-to-Surface					CEMENT TO SURFACE @ 310BBLS INTO DISPLACEMENT
25	05/06/2019 13:49	Land Plug				3100.00	LAND BOTTOM PLUG BURST DISK 3100PSI
26	05/06/2019 14:00	Land Plug	8.4000	2.00	3.00	5100.00	LAND TOP PLUG, PRESSURE TEST 2700PSI FOR 5 MIN, BURST DISK @ 5100PSI SHUTDOWN
27	05/06/2019 14:06	Check Floats					CHECK FLOATS, FLOATS HELD GETTING 3BBLS BACK TO THE PUMP
28	05/06/2019 14:07	End Pumping					END JOB
29	05/06/2019 14:10	STEACS Briefing					STEACS RIG DOWN
30	05/06/2019 14:25	Rig Down					RIG DOWN IRON AND HOSES
31	05/06/2019 15:00	Leave Location					DEPART LOCATION

Customer: Bonanza Creek
Well Number: 44-20-17XRLNC
Lease Info: Antelope Fed



Print Date/Time

5/6/2019 2:37:34 PM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	-29.8	5/6/2019 2:08:20 PM	Cementer\PS_DISCHARGE_PRESS_DIAL
2	DH Density (PPG)	9	5/6/2019 2:08:22 PM	Cementer\DENSITY2_ACTUAL_RATE
3	Combined pump rate		5/6/2019 2:08:22 PM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 2:37:33 PM