



Bonanza Creek Energy

State Antelope Y44-E14-13HNB

API # 05-123-50287

Production

January 16, 2020

Quote #: QUO-41328-D9W3F0

Execution #: EXC-23914-Z9P4T002



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	Zachary Hyde	FORMATION	NIOBRARA
CLIENT FIELD REPRESENTATIVE	Joel	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 (%)
Casing	4.89	5.50	17.00	11,704.00	6,115.00	
Open Hole	8.50	0.00	0.00	11,709.00	6,115.00	10.00
Previous Casing	8.92	9.63	36.00	1,634.00	1,634.00	

HARDWARE

Bottom Plug Used?	Yes	Centralizers Quantity	137.00
Bottom Plug Provided By	Non BJ	Centralizers Type	Rigid
Bottom Plug Size	5.500	Landing Collar Depth (ft)	
Top Plug Used?	Yes	Pipe Movement	None
Top Plug Provided By	Non BJ	Job Pumped Through	No Manifold
Top Plug Size	5.500	Top Connection Thread	BTC
Centralizers Used	Yes	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	14
Circulation Prior to Job	Yes	YP Mud In	10
Circulation Time (min)	120.00	YP Mud Out	10
Circulation Rate (bpm)	8.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	960.00	10 sec SGS	2
Lost Circulation Prior to Cement Job	No	10 min SGS	3
Mud Density In (ppg)	9.70	30 min SGS	6
Mud Density Out (ppg)	9.70	Flare Prior to / during the Cement Job	No
PV Mud In	14	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	20.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	70.00	Flow Line Temperature (°F)	133.00

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				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
Tail Slurry	IntegraCem LITE B03-CY02X	13.5000	1.4274	7.10	0.00	11,693.00	2090	2984.0000	531.3000
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	239.0000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
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-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	243.3100	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-31	0.5000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	IntegraGuard GW-86	1.2000	PPB
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
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	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	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	WEIGHTING ADDITIVE, W-11	243.3100	PPB
Tail Slurry	IntegraCem LITE B03-CY02X	FOAM PREVENTER, FP-25	0.3000	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	IntegraCem LITE B03-CY02X	100.0000	PCT
Tail Slurry	IntegraCem LITE B03-CY02X	RETARDER, SR-20	0.7000	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	RETARDER, R-6	0.6000	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	IntegraCare EC-2	3.0000	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	IntegraGuard GW-86	0.1500	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	IntegraCem LITE B03-CY02X	FLUID LOSS, FL-24	0.2000	BWOB
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	43.00
Calculated Displacement Vol (bbls)	258.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	258.00	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	2.00
Bump Plug Pressure (psi)	2700.00	Total Volume Pumped (bbls)	901.00
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	01/15/2020 21:08	Callout					Crew gets called out. Requested time 200 1/16/20
2	01/15/2020 22:00	Depart for Location					Crew departs for location
3	01/16/2020 01:00	Arrive on Location					Crew arrives on location
4	01/16/2020 01:00	Rig					Crew waits for rig to finish running casing
5	01/16/2020 03:00	Rig Up					Crew rigs up iron and hoses needed for job
6	01/16/2020 04:00	Rig					Rig rigged down casing crew and we were about to go up for a safety meeting and then they realized they forgot to run the last 19 joints
7	01/16/2020 09:00	STEACS Briefing					Crew has a briefing with company man and rig crew
8	01/16/2020 09:23	Prime Up	8.3300	3.00	3.00	200.00	Filled lines 3 bbls
9	01/16/2020 09:25	Pressure Test					Pressure tested lines to 5500psi
10	01/16/2020 09:31	Pump Spacer	11.0000	6.00	20.00	500.00	Pumped 20 bbls of spacer at 11ppg with surfactant
11	01/16/2020 09:34	Pump Spacer	12.0000	6.00	20.00	500.00	Pumped 20bbls of spacer at 12ppg with surfactant
12	01/16/2020 09:38	Pump Spacer	11.0000	6.00	20.00	500.00	Pumped 20bbls of Spacer at 11ppg with surfactant
13	01/16/2020 09:43	Pumping Cement	13.5000	8.00	531.00	500.00	Pumped 531bbls of Tail at 13.5ppg(2090sk,1.42yld,7.10gal/sk)
14	01/16/2020 11:11	End Pumping					Shutdown
15	01/16/2020 11:11	Wash Pumps and Lines					Washed pump and lines
16	01/16/2020 11:21	Drop Bottom Plug					Dropped bottom plug
17	01/16/2020 11:21	Pump Displacement	8.3300	3.00	3.00	100.00	Pumped 3bbls of water with retarder
18	01/16/2020 11:22	Drop Top Plug					Dropped top plug
19	01/16/2020 11:22	Pump Displacement	8.3300	8.00	20.00	400.00	Pumped the first 20 bbls of displacement at
20	01/16/2020 11:24	Pump Displacement	8.3300	8.00	218.00	2600.00	Pumped 218 bbls of displacement at
21	01/16/2020 12:02	Spacer Back-to-Surface					At 135 away got spacer to surface
22	01/16/2020 12:02	Cement Back-to-Surface					At 215 away got cement to surface. Had a total of 43 bbls of cement to surface which was calculated
23	01/16/2020 12:02	Pump Displacement	8.3300	3.00	20.00	2000.00	Slowed rate last 20 bbls to 3 bpm

Client: Bonanza Creek Energy

Well Name / API: STATE ANTELOPE Y44-E14-13HNB / 05-123-50287

Well 11693
MD:



Quote #: QUO-41328-D9W3F0

Plan #: ORD-23914-Z9P4T0

Execution #: EXC-23914-Z9P4T002

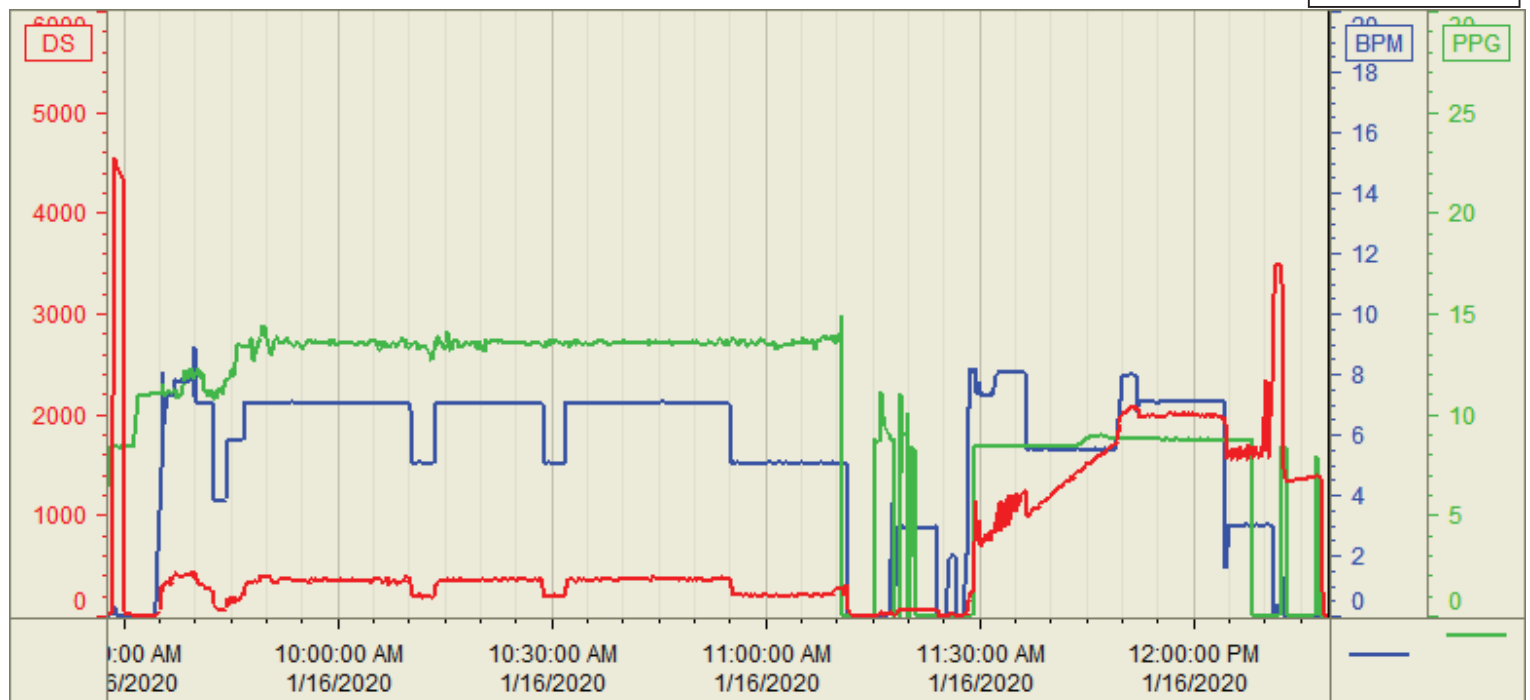
24	01/16/2020 12:10	Land Plug					Landed bottom plug on calculated displacement it burst at 3000psi and pumped 3 more bbls and landed the top plug. It burst at 4600psi then shutdown
25	01/16/2020 12:15	Check Floats					Checked floats got 2 bbls back
26	01/16/2020 12:15	Rig Down					Crew rigs down iron and hoses

Customer: Bonanza Creek
Well Number: #Y44-E14-13HNB
Lease Info: State Antelope



Print Date/Time

1/16/2020 12:45:14 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	-5	1/16/2020 12:18:53 PM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	Density (PPG)	0.01	1/16/2020 12:18:57 PM	Cementer\DENSITY_ACTUAL_RATE
3	Combined Rate (BPM)	0.00	1/16/2020 12:18:57 PM	Cementer\Flow_Combined
4				
5				

Source: Control1 12:45:09 PM