



Bonanza Creek Energy

Antelope 24-19-18XRLNB

API # 05-123-48257

Production

03/18/2019

Quote #: 28348

Execution #: 16421



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	Edgar Rodriguez	FORMATION	NIOBRARA
CLIENT FIELD REPRESENTATIVE	Tim 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	4.78	5.50	20.00	16,954.00	6,398.00	
Open Hole	8.50	0.00	0.00	16,964.00	6,398.00	7.00
Previous Casing	8.92	9.63	36.00	1,624.00	1,600.00	

HARDWARE

Bottom Plug Used?	No	Tool Depth (ft)	16,909.00
Top Plug Used?	Yes	Max Tubing Pressure - Rated (psi)	0.00
Top Plug Provided By	Non BJ	Max Tubing Pressure - Operated (psi)	0.00
Top Plug Size	5.500	Max Casing Pressure - Rated (psi)	9000.00
Centralizers Used	Yes	Max Casing Pressure - Operated (psi)	3800.00
Centralizers Quantity	154.00	Pipe Movement	None
Centralizers Type	Bow	Job Pumped Through	Manifold
Landing Collar Depth (ft)	16,909	Top Connection Thread	BTC
Tool Type	Float Collar	Top Connection Size	5.5

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	15
Circulation Prior to Job	Yes	YP Mud In	6
Circulation Time (min)	120.00	YP Mud Out	6
Circulation Rate (bpm)	10.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	675.00	10 sec SGS	4
Lost Circulation Prior to Cement Job	No	10 min SGS	5
Mud Density In (ppg)	9.60	30 min SGS	9
Mud Density Out (ppg)	9.60	Flare Prior to / during the Cement Job	No
PV Mud In	15	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	35.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	65.00		

Client Name: Bonanza Creek Energy

Well: ANTELOPE #24-19-18XRLNB

Well API: 05-123-48257

Start Date: 3/18/2019

End Date: 3/18/2019



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				80.0000
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	11.0000			0.00				26.0000
Lead Slurry	BJCem P100.3.01C	12.5000	2.1538	12.23	0.00	5,000.00	590	1264.0000	225.1000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4772	7.45	5,000.00	11,784.00	1960	2894.0000	515.3000
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	355.0000

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	IntegraGuard GW-86	1.2000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	RETARDER, R-7C	2.0000	PPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	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	IntegraSeal POLI	0.1300	LBS/SK
Lead Slurry	BJCem P100.3.01C	EXTENDER, BENTONITE	4.0000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, SR-20	0.4000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	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	RETARDER, SR-20	0.0700	BWOB
Tail Slurry	BJCem P50.6.02C	FOAM PREVENTER, FP-25	0.3000	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, SR-61L	0.1000	GPB
Displacement Final	Displacement Final (Water)	BIOCIDE, BIOC11139W	0.0100	GPB

Client Name: Bonanza Creek Energy

Well: ANTELOPE #24-19-18XRLNB

Well API: 05-123-48257

Start Date: 3/18/2019

End Date: 3/18/2019



DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ
Calculated Displacement Vol (bbls)	375.00
Actual Displacement Vol (bbls)	375.00
Did Float Hold?	Yes
Bump Plug	Yes
Bump Plug Pressure (psi)	3800.00
Were Returns Planned at Surface	Yes
Cement Returns During Job	Full

Amt of Cement Returned / Reversed	65.00
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	2.00
Total Volume Pumped (bbls)	1275.00
Top Out Cement Spotted	No
Lost Circulation During Cement Job	No

Client Name: Bonanza Creek Energy

Well: ANTELOPE #24-19-18XRLNB

Well API: 05-123-48257

Start Date: 3/18/2019

End Date: 3/18/2019



BJ Cementing Event Log

Long String - Cheyenne, WY - Edgar Rodriguez

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	03/17/2019 12:00	Depart for Location					CREW LEAVING YARD
2	03/17/2019 14:00	Arrive on Location					CREW ARRIVE ON LOCATION
3	03/17/2019 14:05	Other (See comment)					GET NUMBERS FROM CUSTOMER REP / THEY ARE STILL RUNNING CASING
4	03/17/2019 14:20	STEACS Briefing					STEACS BRIEFING
5	03/17/2019 14:30	Spot Units					SPOT EQUIPMENT
6	03/17/2019 14:45	STEACS Briefing					STEACS BRIEFING
7	03/17/2019 14:55	Rig Up					RIG UP GROUND
8	03/17/2019 16:00	Client					RIG RUNNING CASING
9	03/17/2019 22:10	Client					CASING ON BOTTOM / RIG CASING CREW DOWN
10	03/17/2019 22:40	Client					RIG FILLING UP HOLE
11	03/18/2019 00:05	Rig Up					STAB CEMENT HEAD AND LINES AND CIRCULATE 2 BOTTOMS UP
12	03/18/2019 00:20	Client					RIG CIRCULATING
13	03/18/2019 01:50	STEACS Briefing					JOB STEACS BRIEFING
14	03/18/2019 02:15	Rig Up					SWITCH LINES TO BJ
15	03/18/2019 02:34	Other (See comment)	8.3300	3.00	3.00	150.00	LOAD LINES
16	03/18/2019 02:36	Pressure Test	8.3300	1.00	1.00	4900.00	TEST LINES
17	03/18/2019 02:39	Batch Mix Spacer					BATCH MIX SPACER
18	03/18/2019 02:52	Pump Spacer	11.0000	3.00	26.00	150.00	INTEGRAGUARD SPACER WITH SURFACTANTS
19	03/18/2019 03:00	Pump Spacer	12.0000	3.00	28.00	150.00	INTEGRAGUARD SPACER WITH SURFACTANTS
20	03/18/2019 03:09	Pump Spacer	11.0000	3.00	26.00	150.00	INTEGRAGUARD SPACER WITH SURFACTANTS
21	03/18/2019 03:20	Pump Lead Cement	12.5000	6.50	225.00	400.00	590 SKS TYPE III LEAD CMT / TOP OF LEAD 0'

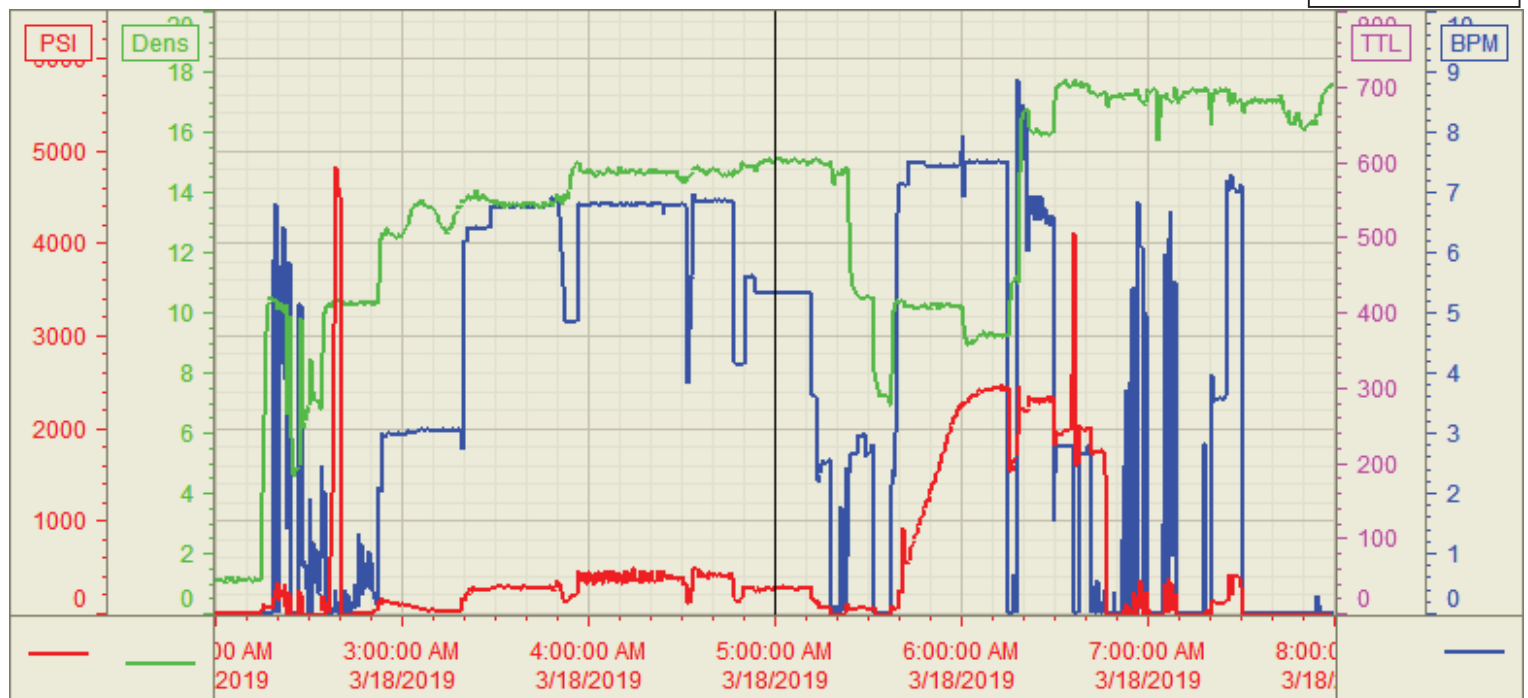
22	03/18/2019 03:56	Pump Tail Cement	13.5000	7.00	515.00	700.00	1960 SKS 50/50 POZ CLASS G TAIL CMT / TOP OF TAIL 4356'
23	03/18/2019 05:18	Wash Pumps and Lines					SHUTDOWN / CLEAN LINES
24	03/18/2019 05:33	Drop Top Plug					DROP TOP PLUG
25	03/18/2019 05:38	Pump Displacement	8.3300	7.50	20.00	200.00	DISPLACEMENT WITH RETARDER
26	03/18/2019 05:40	Pump Displacement	8.3300	7.50		200.00	DISPLACEMENT WITH BIOCID
27	03/18/2019 05:43	Other (See comment)	8.3300	7.50	40.00	1000.00	DISPLACEMENT REACHED CEMENT
28	03/18/2019 06:07	Spacer Back-to- Surface	8.3300	7.50	230.00	2700.00	SPACER OUT
29	03/18/2019 06:23	Cement Back-to- Surface	8.3300	6.50	310.00	2700.00	CEMENT OUT
30	03/18/2019 06:30	Other (See comment)	8.3300	3.00	345.00	2700.00	SLOW RATE TO BUMP PLUG
31	03/18/2019 06:35	Land Plug	8.3300	3.00	375.00	2200.00	LAND PLUG AND SHEARED SLEEVE AT 3800 PSI
32	03/18/2019 06:38	Land Plug	8.3300	3.00	10.00	3800.00	SHEARED SLEEVE AT 3800 PSI / PUMP 10 BBLS ADDITIONAL
33	03/18/2019 06:44	Check Floats					CHECK FLOATS / FLOATS HOLDING / 2 BBLS BACK
34	03/18/2019 06:47	Other (See comment)					RATTLE PUMPS TO WASH RIG STACK
35	03/18/2019 07:15	Other (See comment)	8.3300	6.00	40.00	150.00	WASH RIG STACK
36	03/18/2019 07:30	End Pumping					END JOB / 80 BBLS OF SPACER BACK / 65 BBLS OF CEMENT BACK / FULL RETURNS ENTIRE JOB
37	03/18/2019 07:30	STEACS Briefing					STEACS BRIEFING
38	03/18/2019 07:40	Rig Down					RIG DOWN
39	03/18/2019 08:20	Leave Location					CREW LEAVE LOCATION

Customer: Bonanza Creek
Well Number: 24-19-18XRLNB
Lease Info: Antelope



Print Date/Time

3/18/2019 2:28:20 PM



	Name	Y value	X value/time stamp	Tag name Y
1	PS - Press (PSI)	263.9	3/18/2019 5:00:05 AM	Cementer\PS_DISCHARGE_PRESS_DIAL
2	Den2 - Discharge Density (F	15.04 i.	3/18/2019 5:00:00 AM i.	Cementer\DENSITY2_ACTUAL_RATE
3	Flow Rate (BBLs)	5.36 i.	3/18/2019 5:00:00 AM i.	Cementer\Flow_Combined
4				
5				

Source: Control1 2:28:15 PM