



Bonanza Creek Energy

Latham K21-1-12XRLNB

API # 05-123-50033

Production

September 16, 2019

Quote #: QUO-36471-C5F2X4

Execution #: EXC-21146-Y7Q4J702



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	Hector Montoya	FORMATION	NIOBRARA
CLIENT FIELD REPRESENTATIVE	Bonanza Creek	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	17,644.00	6,295.00	
Previous Casing	8.92	9.63	36.00	1,626.00	1,626.00	
Open Hole	8.50	0.00	0.00	17,655.00	6,295.00	7.00

HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	12640.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	5200.00
Top Plug Size	5.500	Job Pumped Through	Manifold
Centralizers Used	Yes	Top Connection Thread	BTC
Centralizers Quantity	156.00	Top Connection Size	5.5
Centralizers Type	Bow		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	12
Circulation Prior to Job	Yes	YP Mud In	8
Circulation Time (min)	150.00	YP Mud Out	8
Circulation Rate (bpm)	8.00	Solids Present at End of Circulation	No
Circulation Volume (bbls)	1200.00	10 sec SGS	1
Lost Circulation Prior to Cement Job	No	10 min SGS	2
Mud Density In (ppg)	9.60	30 min SGS	4
Mud Density Out (ppg)	9.60	Flare Prior to / during the Cement Job	No
PV Mud In	12	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	85.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	65.00	Flow Line Temperature (°F)	134.00

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Well API: 05-123-50033

Start Date: 9/13/2019

End Date: 9/13/2019

Field Ticket #: FT-21146-Y7Q4J70202-80196



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	1271.0000	226.2000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4772	7.45	5,000.00	12,643.00	2105	3110.0000	553.8000
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	371.0000

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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	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	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-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	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	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	RETARDER, R-7C	2.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer II	SPACER SURFACTANT, SS-267	1.0000	GPB
Lead Slurry	BJCem P100.3.01C	FOAM PREVENTER, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-24	0.3000	BWOB
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	RETARDER, SR-20	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	IntegraSeal POLI	0.1300	LBS/SK
Lead Slurry	BJCem P100.3.01C	IntegraGuard GW-86	0.2000	BWOB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
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	RETARDER, SR-20	0.0700	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	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

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DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amt of Cement Returned / Reversed	51.00
Calculated Displacement Vol (bbls)	391.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	391.00	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)	5200.00	Total Volume Pumped (bbls)	1250.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement Returns During Job	Full	Lost Circulation During Cement Job	No

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BJ Cementing Event Log

Long String - Cheyenne, WY - Hector Montoya

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	09/16/2019 03:00	Callout					BJ Crew gets called out
2	09/16/2019 05:00	Other (See comment)					Load Up for job
3	09/16/2019 07:00	STEACS Briefing					Discuss hazards of driving to location
4	09/16/2019 07:30	Arrive on Location					Arrive safely on location
5	09/16/2019 09:30	STEACS Briefing					Discuss hazards of rigging up
6	09/16/2019 10:00	Rig Up					Rig Up
7	09/16/2019 11:30	Other (See comment)					Wait on Casing to be ran and Circulate
8	09/16/2019 15:55	STEACS Briefing					BJ Crew and Rig Crew discuss hazards of pumping the job and job procedure
9	09/16/2019 16:03	Prime Up					Fill Lines
10	09/16/2019 16:05	Pressure Test					Pressure test to 4500psi
11	09/16/2019 16:06	Pump Spacer	11.0000	4.00	26.00	400.00	Pump 26bbl Spacer at 11ppg
12	09/16/2019 16:12	Pump Spacer	12.0000	4.00	28.00	410.00	Pump 28bbl Spacer at 12ppg
13	09/16/2019 16:18	Pump Spacer	11.0000	4.00	26.00	420.00	Pump 25bbl Spacer at 11ppg
14	09/16/2019 16:28	Pump Lead Cement	12.5000	7.00	226.00	700.00	Lead at 12.5ppg, 590sks BJ Cem P100.3.01C, y-2.15, gps-12.23, mx wtr-171
15	09/16/2019 17:09	Pump Tail Cement	13.5000	6.50	553.00	600.00	Tail at 13.5ppg, 2105sks BJ Cem P50.6.02C, y-1.47, gps-7.45, mix water-373. Estimated Height of Tail at 13553ft, Estimated Top of Tail at 4101ft.
16	09/16/2019 18:34	Wash Pumps and Lines					Clean lines out to the pit
17	09/16/2019 18:44	Drop Top Plug					Customer witnesses Plug leave
18	09/16/2019 18:45	Pump Displacement	8.3300	9.00	371.00	1800.00	Pump Total Displacement 391bbl
19	09/16/2019 19:28	Pump Displacement	8.3300	3.00	20.00	2300.00	Slow rate last 20bbl to 3bpm. 51bbl cement to surface
20	09/16/2019 19:35	Land Plug				5200.00	Land Plug at 2200psi, took to 5200psi to Burst Plug. Pumped 5bbl and checked floats
21	09/16/2019 19:37	Check Floats					Floats Held. 3bbl back
22	09/16/2019 19:40	Rig Down					Rig Down
23	09/16/2019 21:30	Other (See comment)					Depart Location

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Well Name / API: LATHAM #K21-1-12XRLNB / 05-123-50033

Well 17643
MD:



Quote #: QUO-36471-C5F2X4

Plan #: ORD-21146-Y7Q4J7

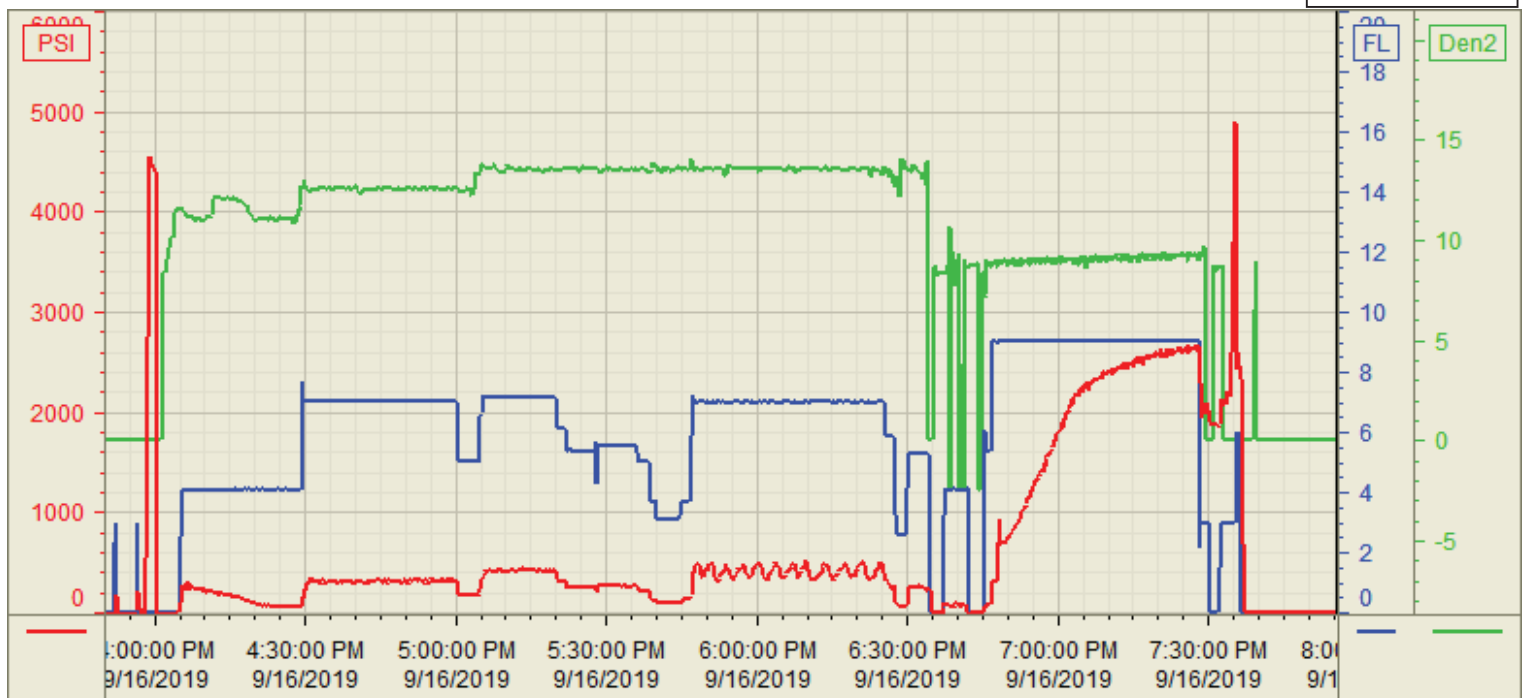
Execution #: EXC-21146-Y7Q4J702

Customer: Bonanza Creek
Well Number: K21-1-12XRLNB
Lease Info: LATHAM



Print Date/Time

9/16/2019 8:50:18 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	8.7	9/16/2019 7:55:26 PM	CementerDS_DISCHARGE_PRESS_DIAL
2	Combined pump rate		9/16/2019 7:55:27 PM i.	CementerFlow_Combined
3	re circdensity		9/16/2019 7:55:27 PM i.	CementerDENSITY_ACTUAL_RATE
4				
5				

Source: Control1 8:50:18 PM