



# HighPoint Operating Corporation

## Production Liner Post-Job Report

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Lion Creek 23-0362B (05-123-47399)

S:23 T:11N R:64W Weld, CO

Quote #:

17354

| Execution #:

09873

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# HighPoint Operating Corporation

Attn: Mr. Matthew Schwartz | (303) 293-9100 | [mschwartz@hpres.com](mailto:mschwartz@hpres.com)

HighPoint Resources | 1099 18th ST, Suite 2300 | Denver, CO 80202

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Dear Mr. Schwartz,

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,

Karl Griesser

Field Engineer I | (713) 829-7498 | [karl.griesser@bjservices.com](mailto:karl.griesser@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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# Cementing Treatment



<b>Start Date</b>	8/18/2018	<b>Project ID</b>	PRJ1009684
<b>End Date</b>	8/19/2018	<b>Well</b>	LION CREEK 23-0362B
<b>Client</b>	HighPoint Operating Corporation	<b>API#</b>	05-123-47399
<b>Service Sup.</b>	Travis Tolman	<b>County</b>	WELD
<b>District</b>	Cheyenne, WY	<b>State/Province</b>	CO
<b>Type of Job</b>	Liner		
<b>Execution ID</b>	EXC-09873-N8G8F402	<b>Rig</b>	Savanna 802

## WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Previous Casing	6.37	7.00	23.00	8,064.00		
Open Hole	6.13	0.00	0.00	18,096.00		10.00
Drill Pipe	3.34	4.00	14.00	7,781.00		
Liner	4.00	4.50	11.60	18,091.00		

**Shoe Length (ft):** 59.00

## HARDWARE

<b>Bottom Plug Used?</b>	No	<b>Landing Collar Depth (ft)</b>	18,032
<b>Top Plug Used?</b>	Yes	<b>Max Casing Pressure - Rated (psi)</b>	10,690.00
<b>Top Plug Provided By</b>	Non BJ	<b>Max Casing Pressure - Operated (psi)</b>	6,000.00
<b>Top Plug Size</b>	4.500	<b>Pipe Movement</b>	None
<b>Centralizers Used</b>	Yes	<b>Job Pumped Through</b>	No Manifold
<b>Centralizers Quantity</b>	200.00	<b>Top Connection Thread</b>	1502
<b>Centralizers Type</b>	Rigid	<b>Top Connection Size</b>	2"

## CIRCULATION PRIOR TO JOB

<b>Well Circulated By</b>	Rig	<b>Solids Present at End of Circulation</b>	No
<b>Circulation Prior to Job</b>	Yes	<b>Flare Prior to/during the Cement Job</b>	No
<b>Circulation Time (min)</b>	60.00	<b>Gas Present</b>	No
<b>Lost Circulation Prior to Cement Job</b>	No		
<b>Mud Density In (ppg)</b>	8.80		

# Cementing Treatment



## TEMPERATURE

Ambient Temperature (°F)	60.00	Slurry Cement Temperature (°F)
Mix Water Temperature (°F)	73.00	Flow Line Temperature (°F)

## BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	11.0000			6,253.00				30.00
Tail Slurry	BJCem L50.6.01C	13.5000	1.5930	7.95	7,775.00	10302	680	1,073.0000	192.50
Displacement 1	Retarded Water	8.3300			16,748.00			0.0000	20.00
Displacement 2	Water + Chems	8.3300			6,589.00	0	0	0.0000	130.00
Displacement 2	Retarded Water	8.3300			13,577.00	0	0	0.0000	20.00
Displacement Final	Water	8.3300			0.00			0.0000	41.00

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SAND, S-8, Silica Flour, 200 Mesh	179.4000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	GELLANT WATER, GW-86	0.8000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	RETARDER, SR-20	0.6000	PPB
Tail Slurry	BJCem L50.6.01C	BONDING AGENT, BA-90	3.0000	LBS/SK
Tail Slurry	BJCem L50.6.01C	BONDING AGENT, EC-2	3.0000	BWOB
Tail Slurry	BJCem L50.6.01C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem L50.6.01C	RETARDER, SR-20	0.2000	BWOB
Tail Slurry	BJCem L50.6.01C	FLUID LOSS, FL-24	0.4000	BWOB
Tail Slurry	BJCem L50.6.01C	EXTENDER, BENTONITE	4.0000	BWOB
Tail Slurry	BJCem L50.6.01C	FOAM PREVENTER, FP-25	0.3000	BWOB

# Cementing Treatment



Tail Slurry	BJCem L50.6.01C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem L50.6.01C	GELLANT WATER, GW-86	0.1000	BWOB
Displacement 2	Water + Chems	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Water + Chems	CLAY STABILIZER ResCare CS	0.0800	GPB
Displacement 2	Retarded Water	RETARDER, R-8L	0.5000	GPB

## TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)
8/19/2018 1:07:00 AM	IntegraGuard EZ Spacer	5.00	30.00	957.00
8/19/2018 1:27:00 AM	BJCem L50.6.01C	5.00	192.50	250.00
8/19/2018 2:54:00 AM	Retarded Water	5.00	20.00	120.00
8/19/2018 3:00:00 AM	Water + Chems	5.00	130.00	1,921.00
8/19/2018 3:30:00 AM	Retarded Water	5.00	20.00	1,976.00
8/19/2018 3:32:00 AM	Water	5.00	41.00	1,200.00

	Min	Max	Avg
Pressure (psi)	120.00	1,976.00	1,070.67
Rate (bpm)	5.00	5.00	5.00

## DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	Amount of Cement Returned/Reversed	20.00
Calculated Displacement Volume (bbls)	220.00	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	211.00	Amount of Spacer to Surface	30.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amount Bled Back After Job	3.50
Bump Plug Pressure (psi)	1,692.00	Total Volume Pumped (bbls)	655.00
Were Returns Planned at Surface	Yes	Top Out Cement Spotted	No
Cement returns During Job	Full	Lost Circulation During Cement Job	No

# EVENT LOG



**Customer Name:** HighPoint Operating Corporation

**Well Name:** LION CREEK 23-0362B

**Job Type:** Liner

**Quote ID:** QUO-17354-L6K3L8

**Plan ID:** ORD-09873-N8G8F4

**Execution ID:** EXC-09873-N8G8F402

**District:** Cheyenne, WY

**BJ Supervisor:**

Seq.	Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol(bbls)	Pipe Pressure(psi)	Comments
1	08/18/2018 11:00	Callout					Crew called out for an on location time of 2300, crew pre trip trucks
2	08/18/2018 16:00	Leave Location					Crew ready to head to location
3	08/18/2018 21:57	Arrive on Location					Arrived on location, running drill pipe, met with company man and tool hand to get numbers, discuss job and safety issues
4	08/18/2018 22:03	Spot Units					Spot equipment
5	08/18/2018 22:05	Safety Meeting					Held safety meeting with crew to discuss rig up, job tasks and safety issues
6	08/18/2018 22:10	Rig Up					Rigged up from equipment to rig floor
7	08/19/2018 00:15	Safety Meeting					Held safety meeting with company man, rig hands and crew to discuss job and safety issues
8	08/19/2018 00:49	Start Pumping	8.3000	2.00	3.00	399.00	Load pump and lines with fresh water
9	08/19/2018 00:52	Pressure Test	8.3000			7,702.00	Pressure tested pump and lines
10	08/19/2018 00:56	Start Pumping	8.3000	3.60	17.00	957.00	Pump fresh water spacer
11	08/19/2018 01:07	Pump Spacer	11.0000	3.80	30.00	957.00	Pump 30bbls of spacer at 11#-2.18Y-13.12gps
12	08/19/2018 01:27	Pump Lead Cement	13.5000	3.80	193.00	250.00	Pump 680sks/192.5bbls of cement at 13.5#-1.59Y-7.95gps
13	08/19/2018 02:32	End Pumping					Shut down
14	08/19/2018 02:37	Clean Pumps and Lines	8.3000				Wash pump and lines
15	08/19/2018 02:47	Start Pumping	8.3000	2.50	5.00	120.00	Pump 5bbls wet shoe with R-8
16	08/19/2018 02:49	End Pumping					Shut down

# EVENT LOG



17	08/19/2018 02:51	Drop Opening Plug					Drop dart for plug, witnessed by company man, tool hand and BJ rep
18	08/19/2018 02:54	Pump Displacement	8.3000	5.00	50.00	1,692.00	Pump displacement with chemicals
19	08/19/2018 03:07	Other (See comment)	8.3000	3.20	10.00	1,692.00	Slowed rate to pick up plug, 59bbls to catch plug
20	08/19/2018 03:10	Pump Displacement	8.3000	5.00	145.00	2,098.00	Pump displacement with chemicals
21	08/19/2018 03:39	Other (See comment)	8.3000	3.20	6.00	1,200.00	Slowed rate to land plug
22	08/19/2018 03:41	Land Plug				1,692.00	Landed plug at 211bbls away
23	08/19/2018 03:43	Start Pumping	8.3000			3,800.00	Pressured up to set packer
24	08/19/2018 03:45	Check Floats	8.3000				Check float, held good, 3.5bbls back
25	08/19/2018 03:52	Start Pumping	8.3000	1.20	2.00	2,047.00	Pressure up on back side for test
26	08/19/2018 03:53	Pressure Test	8.3000			2,047.00	Pressure test back side
27	08/19/2018 03:58	Check Floats					Bleed off pressure, switch back to drill pipe
28	08/19/2018 04:01	Start Pumping	8.3000	2.50	2.00	4,375.00	Put pressure to burst plug
29	08/19/2018 04:03	Check Floats					Bleed off pressure
30	08/19/2018 04:07	Start Pumping	8.3000	7.40	213.00	2,300.00	Rolled hole clean, got 30bbls of spacer back and 20bbls of cement to surface
31	08/19/2018 04:40	End Pumping					Shut down
32	08/19/2018 04:45	Safety Meeting					Held safety meeting with crew to discuss rig down and safety
33	08/19/2018 04:55	Rig Down					Rigged down from rig floor to equipment
34	08/19/2018 06:00	Leave Location					Crew ready to leave location



JobMaster Program Version 4.02C1

Job Number:

Customer: Highpoint

Well Name:

