



# Crestone Peak Resources Operating

Lochbuie Land 2A-25H-D166

API # 05-123-47991

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## Surface

01/05/2019

Quote #: 47991

Execution #: 14595



# Crestone Peak Resources Operating

Attention: Mr. Jerry Thorstad | (303) 829-8179 | [Jerry.Thorstad@Crestonepr.com](mailto:Jerry.Thorstad@Crestonepr.com)

Crestone Peak Resources Operating | 10188 E I25 Frontage Rd. | Firestone, CO. 80504

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Dear Mr. Jerry Thorstad,

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,  
Jason Creel  
Field Engineer I | (307) 256-0306 | [Jason.Creel@bjsservices.com](mailto:Jason.Creel@bjsservices.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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# BJ Cementing Treatment Report

SERVICE SUPERVISOR	Hector Montoya	SERVICE	Cementing
CLIENT FIELD REPRESENTATIVE	CRESTONE	COUNTY	WELD
DISTRICT	Cheyenne, WY	STATE / PROVINCE	CO

## WELL GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Casing	9.63	8.84	40.00	2,372.00	2,354.00	
Open Hole	0.00	13.50	0.00	2,387.00	2,369.00	25.00

## HARDWARE

Bottom Plug Used?	No	Landing Collar Depth (ft)	2,346
Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Provided By	Non BJ	Max Casing Pressure - Operated (psi)	2680.00
Top Plug Size	9.625	Job Pumped Through	Manifold
Centralizers Used	Yes	Top Connection Thread	LTC
Centralizers Quantity	55.00	Top Connection Size	9.625
Centralizers Type	Bow		

## CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	Mud Density In (ppg)	8.90
Circulation Prior to Job	Yes	Mud Density Out (ppg)	8.90
Circulation Time (min)	30.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	5.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	150.00	Gas Present	No
Lost Circulation Prior to Cement Job	No		

## TEMPERATURE

Ambient Temperature (°F)	40.00	Slurry Cement Temperature (°F)	55.00
Mix Water Temperature (°F)	50.00	Flow Line Temperature (°F)	50.00

## FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H <sub>2</sub> O REQ (gals/sk)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Tail Slurry	S100.3.XC	14.2000	1.4614	7.34	1002	1464.0000	260.6000
Displacement Final	Displacement	8.3337				0.0000	177.0000

FLUID TYPE	FLUID NAME	COMPONENT	CONCENTRATION	UOM
Tail Slurry	S100.3.XC	CEMENT, ASTM TYPE III	100.0000	PCT

### DISPLACEMENT AND END OF JOB SUMMARY

<b>Displaced By</b>	BJ	<b>Amt of Cement Returned / Reversed</b>	88.00
<b>Calculated Displacement Vol (bbls)</b>	177.00	<b>Method Used to Verify Returns</b>	Visual
<b>Actual Displacement Vol (bbls)</b>	177.00	<b>Amt of Spacer to Surface</b>	5.00
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0.00
<b>Bump Plug</b>	Yes	<b>Amt Bled Back After Job</b>	1.00
<b>Bump Plug Pressure (psi)</b>	1260.00	<b>Total Volume Pumped (bbls)</b>	177.00
<b>Were Returns Planned at Surface</b>	Yes	<b>Top Out Cement Spotted</b>	Yes
<b>Cement Returns During Job</b>	Full	<b>Lost Circulation During Cement Job</b>	No



# BJ Cementing Event Log

Surface - Cheyenne, WY - Hector Montoya

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	01/05/2019 06:30	Callout					BJ Crew gets called out
2	01/05/2019 08:30	STEACS Briefing					BJ Crew talks about the hazards of driving to location
3	01/05/2019 09:30	Arrive on Location					BJ Crew safely arrives on location
4	01/05/2019 11:30	STEACS Briefing					BJ Crew talks about the hazards of rigging up
5	01/05/2019 12:00	Rig Up					Rig Up
6	01/05/2019 14:00	STEACS Briefing					BJ Crew and Rig Crew talk about the hazards of pumping the job and discuss job procedure
7	01/05/2019 14:44	Prime Up	8.3300	3.00	3.00	100.00	Fill Lines
8	01/05/2019 14:46	Pressure Test					Pressure test to 3000psi
9	01/05/2019 14:49	Pump Spacer	8.3300	3.00	20.00	140.00	Pump 20bbl fresh water with poly
10	01/05/2019 15:00	Pump Tail Cement	14.2000	5.00	260.00	280.00	Pump 260bbl Tail cement at 14.2ppg, 1005sks of S100.3.XC, yield 1.46, 7.34gps, 175bbl mix water
11	01/05/2019 16:03	Drop Top Plug					Customer witnesses plug leave
12	01/05/2019 16:07	Pump Displacement	8.3300	7.00	165.00	740.00	Pump 177bbl of Fresh water
13	01/05/2019 17:20	Cement Back-to-Surface					88bbl cement to surface
14	01/05/2019 17:33	Pump Displacement	8.3300	3.00	10.00	1280.00	Slow rate last 10bbl to 3bpm
15	01/05/2019 17:37	Land Plug					Final pressure was 740psi took to 1280psi
16	01/05/2019 17:42	Check Floats					Floats held, 1bbl back
17	01/05/2019 17:44	Top Out					Pump 15bbl at 14.2ppg into wells 2B & 2A
18	01/05/2019 18:30	STEACS Briefing					BJ Crew Talks about hazards of rigging down
19	01/05/2019 18:40	Rig Down					Rig Down
20	01/05/2019 19:30	Leave Location					BJ Crew leaves location

# CRESTONE

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