



# Crestone Peak Resources Operatin<sup>+</sup>

Lochbuie Land 2L-25H-D166

API # 05-123-47987

Surface

12/14/2018

Quote #: 24045

Execution #: 13927



# 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@bjservices.com](mailto:Jason.Creel@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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# 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	2,385.00	2,344.00	
Open Hole	0.00	13.50	0.00	2,400.00	2,359.00	25.00

## HARDWARE

Top Plug Used?	Yes	Landing Collar Depth (ft)	2,361
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2820.00
Centralizers Used	Yes	Job Pumped Through	Manifold
Centralizers Quantity	55.00	Top Connection Thread	LTC
Centralizers Type	Bow	Top Connection Size	9.625

## 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)	45.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	5.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	120.00	Gas Present	No
Lost Circulation Prior to Cement Job	No		

## TEMPERATURE

Ambient Temperature (°F)	45.00	Slurry Cement Temperature (°F)	70.00
Mix Water Temperature (°F)	62.00	Flow Line Temperature (°F)	70.00

### 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	1010	1476.0000	262.7000
Displacement Final	Displacement	8.3337				0.0000	178.0000

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

Displaced By	BJ	Amt of Cement Returned / Reversed	48.00
Calculated Displacement Vol (bbls)	178.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	178.00	Amt of Spacer to Surface	10.00
Did Float Hold?	Yes	Pressure Left on Casing (psi)	0.00
Bump Plug	Yes	Amt Bled Back After Job	1.00
Bump Plug Pressure (psi)	1270.00	Total Volume Pumped (bbls)	377.00
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

Surface - Cheyenne, WY - Hector Montoya

SEQ	START DATE / TIME	EVENT	DENSITY (ppg)	PUMP RATE (bpm)	PUMP VOL (bbls)	PIPE PRESSURE (psi)	COMMENTS
1	12/13/2018 23:00	Callout					BJ Crew gets called out
2	12/14/2018 01:32	STEACS Briefing					BJ Crew talks about the hazards of driving to location
3	12/14/2018 02:00	Arrive on Location					BJ Crew safely arrives on location
4	12/14/2018 05:00	STEACS Briefing					B Crew talks about the hazards of spotting equipment and rigging up
5	12/14/2018 05:30	Rig Up					Rig Up
6	12/14/2018 07:30	STEACS Briefing					BJ Crew and Rig Crew talk about the hazards of pumping the job and go over the job procedure
7	12/14/2018 08:00	Prime Up	8.3300	2.00	3.00	60.00	Fill lines
8	12/14/2018 08:07	Pressure Test					Pressure test to 3000psi
9	12/14/2018 08:10	Pump Spacer	8.3300	2.00	20.00	80.00	Pump 20bbl Red Dye Spacer
10	12/14/2018 08:23	Pump Tail Cement	14.2000	5.00	262.00	200.00	Pump 262bbl Tail cement at 14.2ppg, 1010sks of S100.3.XC, yield 1.46, 7.34gps, 176bbl mix water
11	12/14/2018 09:28	Drop Top Plug					Customer witnesses plug leave
12	12/14/2018 09:38	Pump Displacement	8.3300	7.00	168.00	810.00	Pump 168bbl of Fresh Water
13	12/14/2018 10:15	Pump Displacement	8.3300	3.00	10.00	1270.00	Slow rate to 3bpm last 10bbls to land plug
14	12/14/2018 10:18	Land Plug					Land Plug, final circulating pressure was 790psi took to 1270psi and held for 5minutes
15	12/14/2018 10:23	Check Floats					Floats held, 1bbl back to the truck
16	12/14/2018 10:25	STEACS Briefing					BJ Crew talks about the hazards of rigging down
17	12/14/2018 10:30	Rig Down					Rig down
18	12/14/2018 11:30	Leave Location					BJ Crew leaves location
19	12/14/2018 13:00	Other (See comment)					Got 48bbl of cement to surface, plug landed at calculated, floats held, 1bbl back to the truck

CRESTONE  
2L-25H-D166 - - Surface

