



Crestone Peak Resources Operating

Lochbuie Land 2I-25H-D166

API # 05-123-47993

Surface

12/18/2018

Quote #: 24283

Execution #: 14045



Crestone Peak Resources Operating

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

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

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

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	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 (%)
Open Hole	0.00	13.50	0.00	2,377.00	2,362.00	25.00
Casing	9.63	8.84	40.00	2,367.00	2,352.00	

HARDWARE

Top Plug Used?	Yes	Landing Collar Depth (ft)	2,337
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2580.00
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)	30.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	6.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	180.00	Gas Present	No
Lost Circulation Prior to Cement Job	No		

TEMPERATURE

Ambient Temperature (°F)	40.00	Slurry Cement Temperature (°F)	65.00
Mix Water Temperature (°F)	60.00	Flow Line Temperature (°F)	65.00

FLUID DETAILS

FLUID TYPE	FLUID NAME	DENSITY (ppg)	YIELD (Cu Ft/sk)	H ₂ O REQ (gals/sk)	VOL (sk)	VOL (Cu Ft)	VOL (bbls)
Tail Slurry	S100.3.XC	14.2000	1.4614	7.34	1000	1461.0000	260.0000
Displacement Final	Displacement	8.3337				0.0000	177.1000

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	52.00
Calculated Displacement Vol (bbls)	177.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	177.00	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)	1340.00	Total Volume Pumped (bbls)	375.00
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	12/18/2018 04:30	Callout					BJ Crew gets called out
2	12/18/2018 05:30	STEACS Briefing					BJ Crew talks about the hazards of driving to location
3	12/18/2018 06:00	Arrive on Location					BJ Crew safely arrives on location
4	12/18/2018 09:00	STEACS Briefing					BJ Crew talks about the hazards of spotting equipment and rigging up
5	12/18/2018 09:30	Rig Up					Rig Up
6	12/18/2018 12:30	STEACS Briefing					BJ Crew and Rig Crew talk about the hazards of pumping the job and go over the job procedure
7	12/18/2018 12:52	Prime Up	8.3300	2.00	3.00	90.00	Fill Lines
8	12/18/2018 12:57	Pressure Test					Pressure test to 3000psi
9	12/18/2018 13:00	Pump Spacer	8.3300	3.00	20.00	110.00	Pump 20bbl Red Dye
10	12/18/2018 13:10	Pump Tail Cement	14.2000	6.00	260.00	300.00	Pump 260bbl Tail cement at 14.2ppg, 1005sks of S100.3.XC, yield 1.46, 7.34gps, 175bbl mix water
11	12/18/2018 14:10	Drop Top Plug					Customer witnesses plug leave
12	12/18/2018 14:14	Pump Displacement	8.3300	7.00	167.00	820.00	Pump 177bbl of Fresh Water
13	12/18/2018 14:15	Pump Displacement	8.3300	3.00	10.00	1340.00	Slow rate last 10bbl to
14	12/18/2018 14:44	Land Plug				1340.00	Final circulating pressure was 880psi took to 1340psi, hold for 5min
15	12/18/2018 14:53	Check Floats					Floats held, 1bbl back
16	12/18/2018 14:58	STEACS Briefing					BJ Crew talks about hazards of rigging down
17	12/18/2018 15:00	Rig Down					Rig down
18	12/18/2018 16:00	Leave Location					BJ Crew departs location
19	12/18/2018 16:30	Other (See comment)					52bbl of cement to surface



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