



Crestone Peak Resources Operating

Lochbuie Land 2J-25H-D166

API # 05-123-47992

Surface

12/17/2018

Quote #: 24276

Execution #: 14017



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

WELL GEOMETRY

TYPE	OD (in)	ID (in)	WEIGHT (lb/ft)	MD (ft)	TVD (ft)	EXCESS (%)
Casing	9.63	8.84	40.00	2,371.00	2,351.00	
Open Hole	0.00	13.50	0.00	2,385.00	2,365.00	25.00

HARDWARE

Top Plug Used?	Yes	Landing Collar Depth (ft)	2,369
Top Plug Provided By	Non BJ	Max Casing Pressure - Rated (psi)	3520.00
Top Plug Size	9.625	Max Casing Pressure - Operated (psi)	2860.00
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)	300.00	Solids Present at End of Circulation	No
Circulation Rate (bpm)	4.00	Flare Prior to / during the Cement Job	No
Circulation Volume (bbls)	1500.00	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)	61.00	Flow Line Temperature (°F)	60.00

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	1002	1464.0000	260.7000
Displacement Final	Displacement	8.3337				0.0000	179.5000



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	57.00
Calculated Displacement Vol (bbls)	179.00	Method Used to Verify Returns	Visual
Actual Displacement Vol (bbls)	179.00	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)	1220.00	Total Volume Pumped (bbls)	550.00
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	12/16/2018 15:30	Callout					BJ Crew gets called out
2	12/16/2018 16:30	STEACS Briefing					BJ Crew talks about the hazards of driving to location
3	12/16/2018 17:00	Arrive on Location					BJ crew safely arrives on location
4	12/16/2018 19:00	STEACS Briefing					BJ Crew talks about the dangers of rigging up
5	12/16/2018 19:30	Rig Up					Rig Up
6	12/16/2018 21:00	Other (See comment)					Wait on Rig to run casing
7	12/17/2018 02:20	STEACS Briefing					BJ Crew and rig crew talk about the hazards of pumping the job
8	12/17/2018 02:32	Prime Up	8.3300	2.00	3.00		Fill lines 3bbl
9	12/17/2018 02:36	Pressure Test					Pressure test to 3000psi
10	12/17/2018 02:39	Pump Spacer	8.3300	3.00	20.00	100.00	Pump 20bbl Red Dye
11	12/17/2018 02:49	Pump Tail Cement	14.2000	2.00	40.00	200.00	Pump 262bbl Tail cement at 14.2ppg, 1010sks of S100.3.XC, yield 1.46, 7.34gps, 176bbl mix water
12	12/17/2018 03:20	Other (See comment)					Cement pump not mixing correctly, keeps powdering off, cannot bring cement up to density, had to shut down after trying to batch up 2times. Recirc pump not mixing correctly. BJ crew could not continue to mix cement after about 40bbls, BJ had to shut down and the Rig Cleaned the hole with Water Base Mud, Rig Pumped a total of 1500bbls until BJ was ready with a different pump. Rig waited total of 4hrs until BJ was ready to come back online. Cement to surface was 57bbl, Plug Landed final circulating pressure was 710psi took to 1220psi, Floats held 1bbl back to the truck
13	12/17/2018 04:10	Equipment Issue					BJ Crew leaves location to go pick up another pump to finish the job, meanwhile Rig pumps 1500bbls of water base mud until BJ is ready
14	12/17/2018 09:00	STEACS Briefing					BJ Crew and rig crew talk about the hazards of pumping the job
15	12/17/2018 09:11	Prime Up	8.3300	2.50	3.00	110.00	3bbl to fill lines
16	12/17/2018 09:13	Pressure Test					Pressure test to 3000psi
17	12/17/2018 09:18	Pump Spacer	8.3300	3.00	20.00	140.00	Pump 20bbl Red Dye

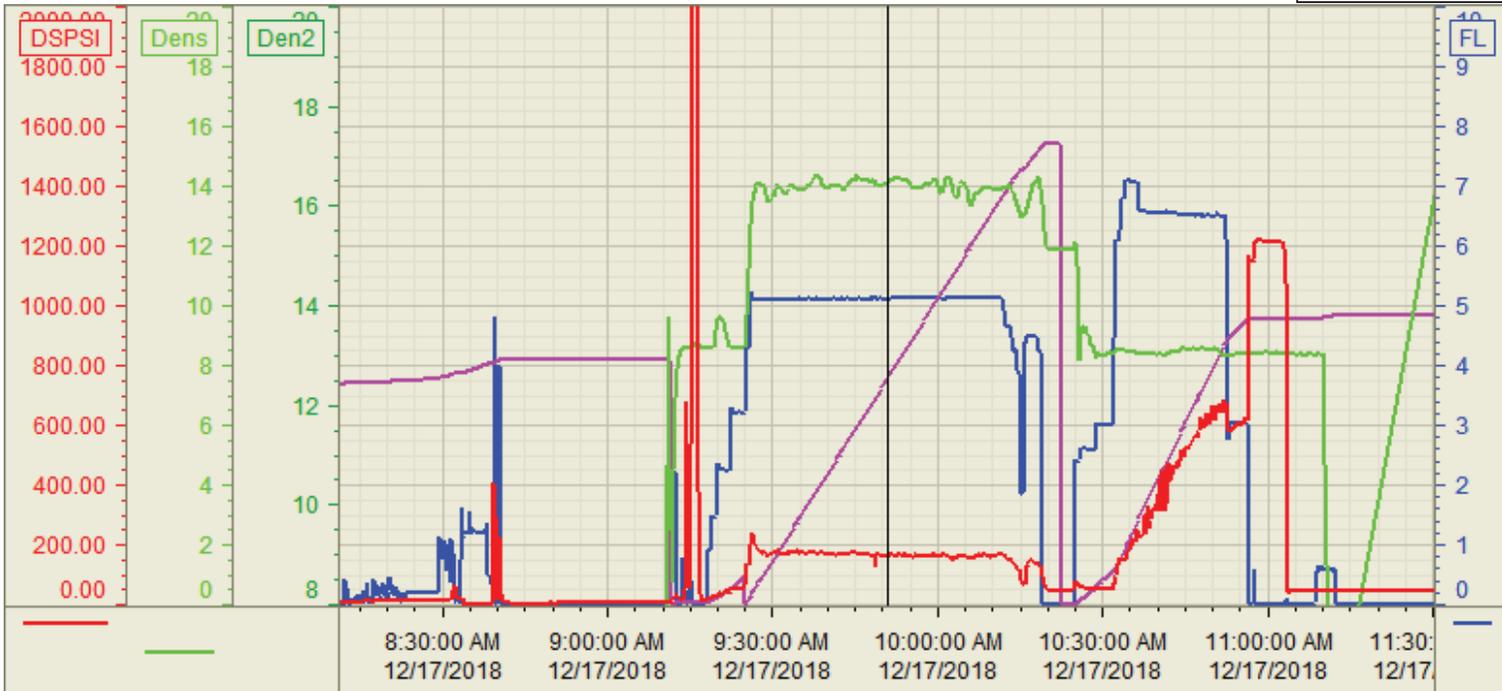


18	12/17/2018 09:25	Pump Tail Cement	14.2000	5.00	260.00	200.00	Pump 262bbl Tail cement at 14.2ppg, 1010sks of S100.3.XC, yield 1.46, 7.34gps, 176bbl mix water
19	12/17/2018 10:18	Drop Top Plug					Customer witnesses Top Plug Leave
20	12/17/2018 10:24	Pump Displacement	8.3300	7.00	169.00	780.00	Pump Total 179bbl of Fresh Water displacement
21	12/17/2018 10:52	Pump Displacement	8.3300	3.00	10.00	1220.00	Slow rate last 10bbl to Land the Plug
22	12/17/2018 10:57	Land Plug					Land Plug, Final Circulating pressure was 710psi took to 1220psi, held pressure for 5min
23	12/17/2018 11:02	Check Floats					Floats Hold, 1bbl back to the truck
24	12/17/2018 11:04	STEACS Briefing					BJ Crew talks about the hazards of rigging down
25	12/17/2018 11:20	Rig Down					Rig Down
26	12/17/2018 12:00	Leave Location					BJ Crew departs location
27	12/17/2018 13:00	Other (See comment)					BJ crew could not continue to mix cement after about 40bbls, BJ had to shut down and the Rig Cleaned the hole with Water Base Mud, Rig Pumped a total of 1500bbls until BJ was ready with a different pump. Rig waited total of 4hrs until BJ was ready to come back online. Cement to surface was 57bbl, Plug Landed final circulating pressure was 710psi took to 1220psi, Floats held 1bbl back to the truck

Customer: Crestone Peak
 Well Number: 2J-25H-D166
 Lease Info: Lochbuie Land



Print Date/Time
 12/17/2018 5:28:50 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	161.6	12/17/2018 9:50:45 AM	Cementer\DS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	14.08	12/17/2018 9:50:51 AM	Cementer\DENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLs)	132 i.	12/17/2018 9:50:50 AM i.	Cementer\DOWNHOLE_FLOW_TOTAL
4	BPM	5.12 i.	12/17/2018 9:50:50 AM i.	Cementer\Flow_Combined
5				

Source: Control1 5:28:46 PM