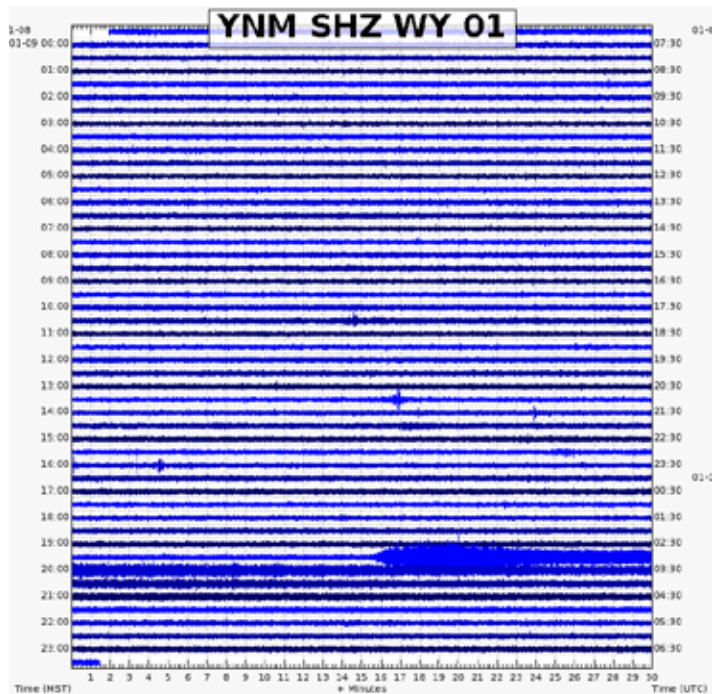


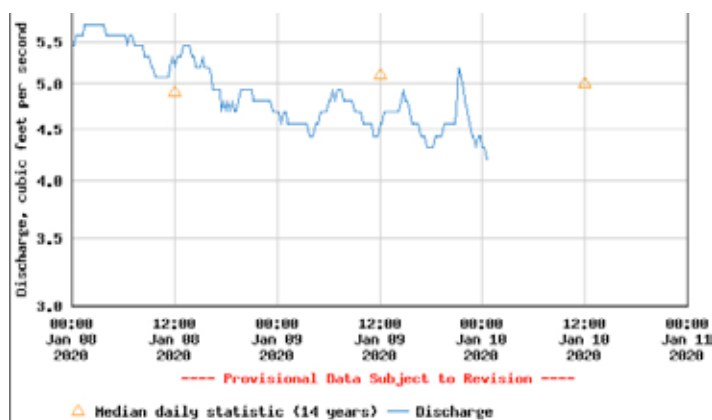
Steamboat Geyser 2020

06 Jan 2020 @1200 by ypcaribou. Geysertimes note #14062 | Observed [by Chris Burke, YVT Guide] while on tour (exact time not known). When asked if there were “Tall minors? Concerted from both vents?” His response was “Yup.” Hey, I’ll take that over no observation at all.

09 Jan 2020 @ 1945 E by Polly. Geysertimes eruption #1157586 | **ERUPTION** | Per YNM seismograph.



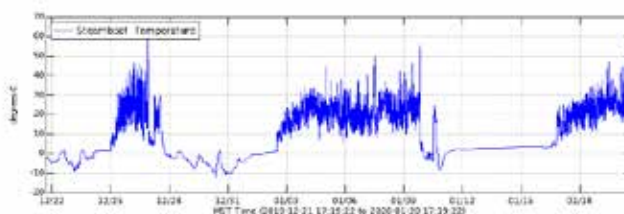
Norris Museum seismogram showing Steamboat Geyser’s 7:45 PM major eruption on 9 January 2020. [Caption and screen capture by JSJ]



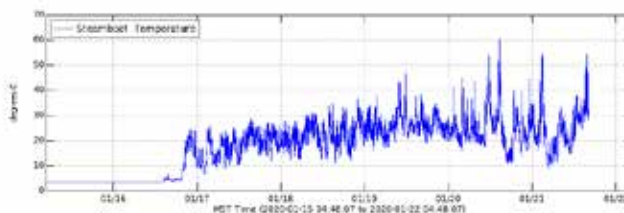
Tantalus Creek discharge graph showing Steamboat Geyser’s 7:45 PM major eruption on 9 January 2020. [Caption and screen capture by JSJ]

19 Jan 2020 @1000-1030 by ypcaribou. Geysertimes note #14067 | Roy [YVT snowcoach guide] told Bob who told me: 50 ft minors from Nvent around this time of day.

20 Jan 2020 @1415 by underarockphoto. Geysertimes note #14077 | YVO Logger registered a temp spike of over 60C. The spike is roughly the size of a full major eruption. This is put here in the context of reports (I do not have specific references at this moment) that SB had periods of exceptionally large minor eruptions in the 1980s and 1960s without erupting that dragged out its intervals as it regressed into dormancy. I leave these notes here in that (possible) context. 7d logger: <https://imgur.com/Eqgoh6C> 1d logger: <https://imgur.com/yRm-kZkT> 1mo logger: <https://imgur.com/45eyWu7> [below]



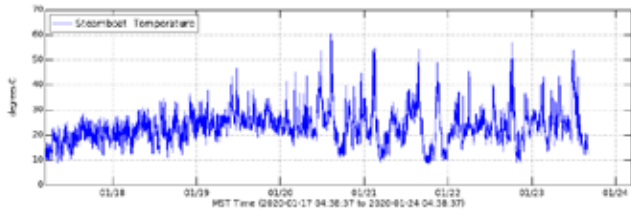
21 Jan 2020 @0400 by underarockphoto. Geysertimes Note #14087 | Another very large spike on the YVO chart, similar to the one 12 hours earlier, also as large as a major eruption spike. This is put here in the context of reports (I do not have specific references at this moment) that SB had periods of exceptionally large minor eruptions in the 1980s and 1960s without erupting that dragged out its intervals as it regressed into dormancy. I leave these notes here in that (possible) context. <https://imgur.com/K3XiVJ5> [below]



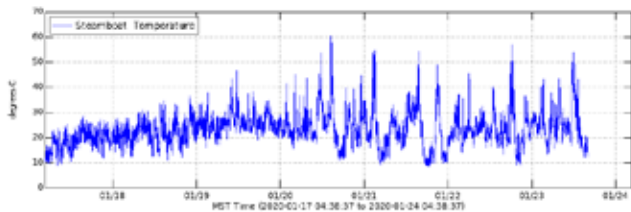
21 Jan 2020 @1600 by underarockphoto. Geysertimes note #14088 | <https://imgur.com/K3XiVJ5> Another large spike similar to a major eruption event, and similar to the events of 12 and 24hrs prior. This is put here in the context of reports (I do not have specific references at this moment) that SB had periods of exceptionally large minor eruptions in the 1980s and 1960s without erupting that dragged out its intervals as it regressed into dormancy. I leave these notes here in that (possible) context.

[Editor Note: the image link is the same as the one listed for the note at 0400]

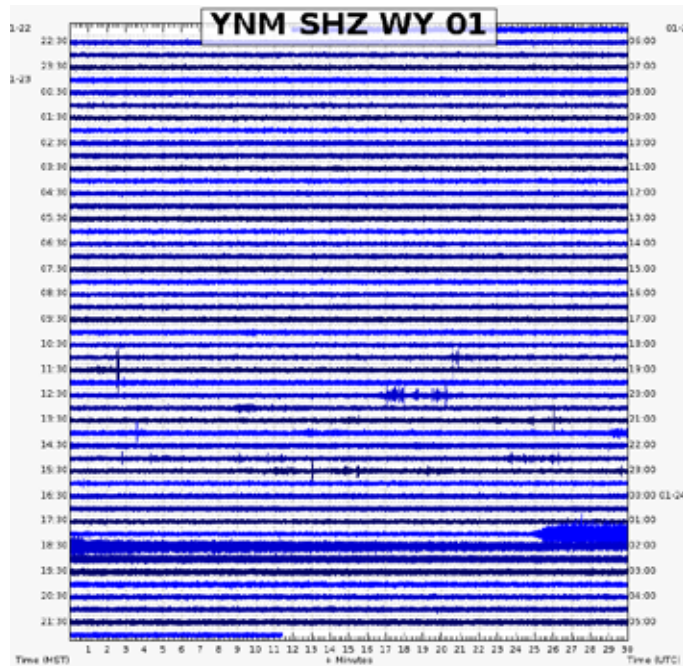
21 Jan 2020 @2200 by underrockphoto. Geysertimes note #14100 | Large spike to 49C followed by a pronounced trough. <https://imgur.com/5B5C7Ro> [below]



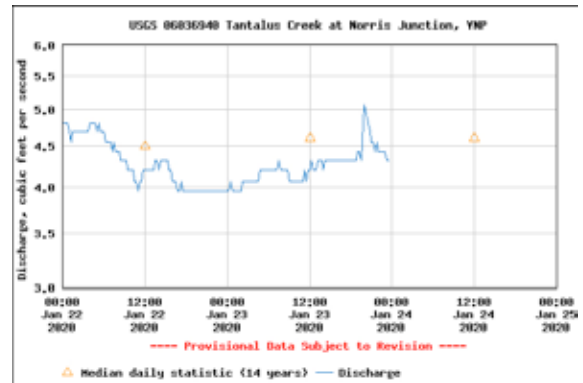
23 Jan 2020 @0443 by underrockphoto. Geysertimes note #14102 | Large spike to 53C and then a pronounced trough. <https://imgur.com/5B5C7Ro> [below]



23 Jan 2020 @1825 E by nlydeen. Geysertimes eruption #1158584 | **ERUPTION** | YNM seismogram



Norris Museum seismogram showing Steamboat Geyser's 6:24 PM major eruption on 23 January 2020. [Caption and screen capture by JSJ]

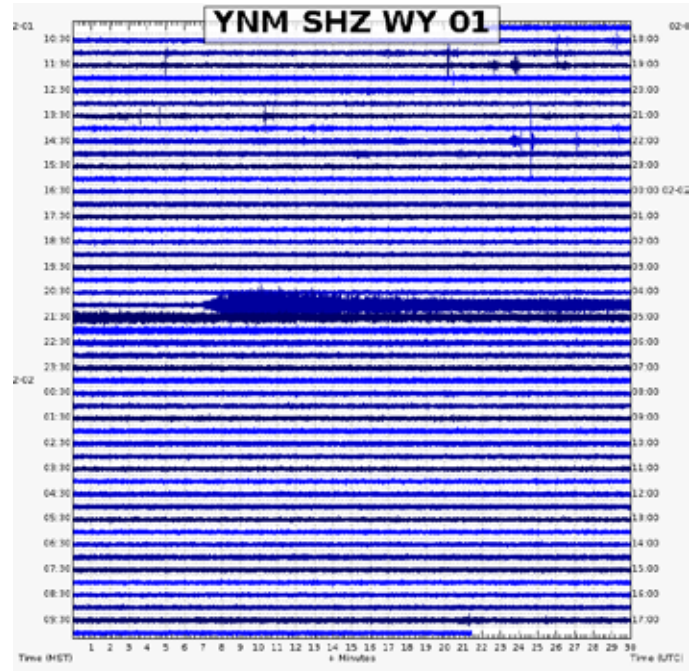


Tantalus Creek discharge graph showing Steamboat Geyser's 6:24 PM major eruption on 23 January 2020. [Caption and screen capture by JSJ]

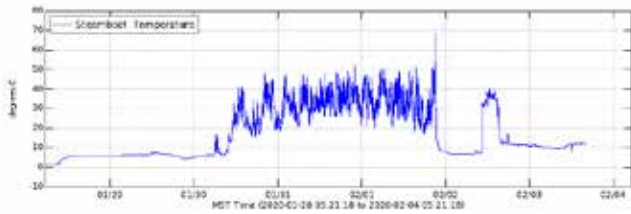
24 Jan 2020 @ 1050 by Graham. Geysertimes Note #14103 | 16h25m after the start. Steamboat Geyser in mixed steam and water phase. Cistern Spring water level dropping into inner tube.

31 Jan 2020 @0955-1015 by Micah Kipple. Geysertimes Note #14108 | Weak concerted activity from both vents with 2 vertical splashes seem from south vent and some bigger angled concerted play near the very end. No north vertical seen. Steady 1 runoff on the stearge scale. Trough is mostly filled with gravel and there are gravel bars near the vent and in the channel as viewed from lower deck which suggests no big minors yet. Trees continue to he killed further into the forest.

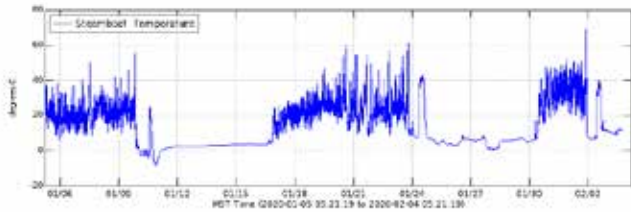
1 Feb 2020 @2107 E by nlydeen. Geysertimes eruption #1159151 | **ERUPTION** | YNM Seismogram



Norris Museum seismogram showing Steamboat Geyser's 9:06 PM major eruption on 1 February 2020. [Caption and screen capture by JSJ]



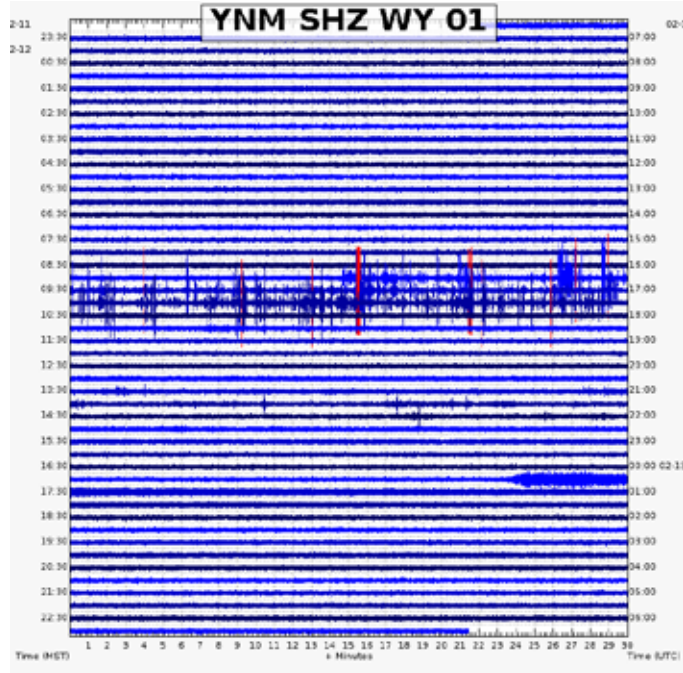
1wk YVO logger in runoff channel [Caption and screen capture by underrockphoto]



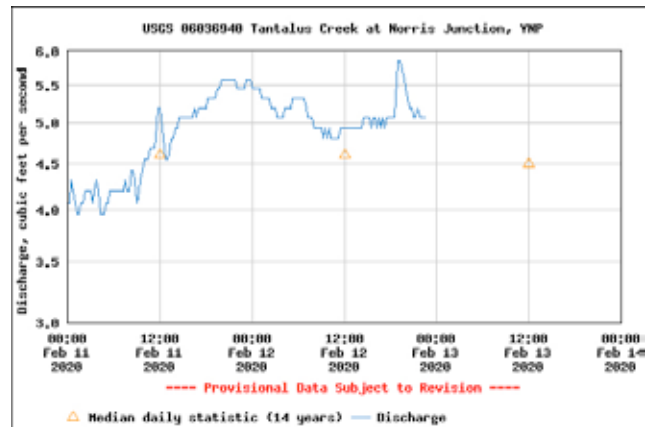
1mo channel logger YVO [Caption and screen capture by underrockphoto]

10 Feb 2020 @1300-1320 by Micah Kipple. Geysertimes Note#14118 | Little to no overflow. Runoff channel filled with snow from the “dead forest” all the way to the bridge. North vent having some considerable angled minors. South vent having small angled minors and MAYBE one brief vertical splash. Overall. It looks worse than when I saw it a couple weeks ago.

12 Feb 2020 @1723 E by nlydeen. Geysertimes eruption #1159793 | **ERUPTION** | YNM seismogram

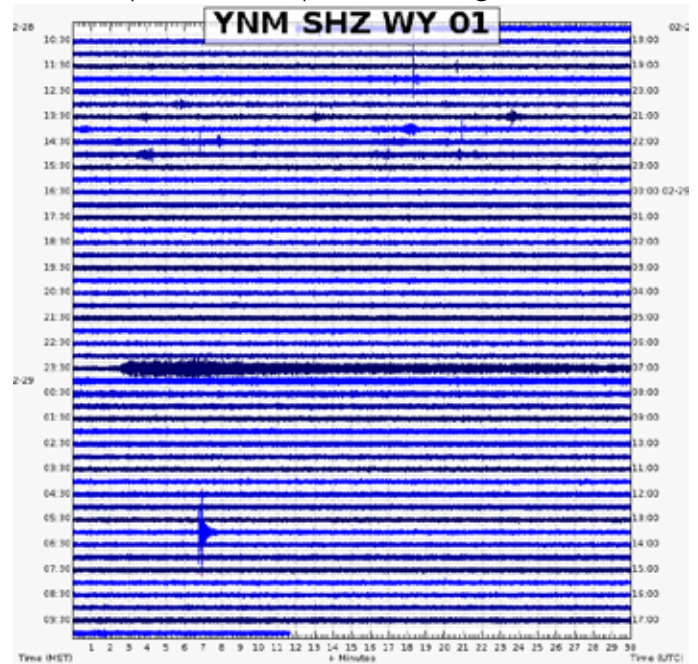


Norris Museum seismogram showing Steamboat Geyser’s 5:23 PM major eruption on 12 February 2020. [Caption and screen capture by JSJ]

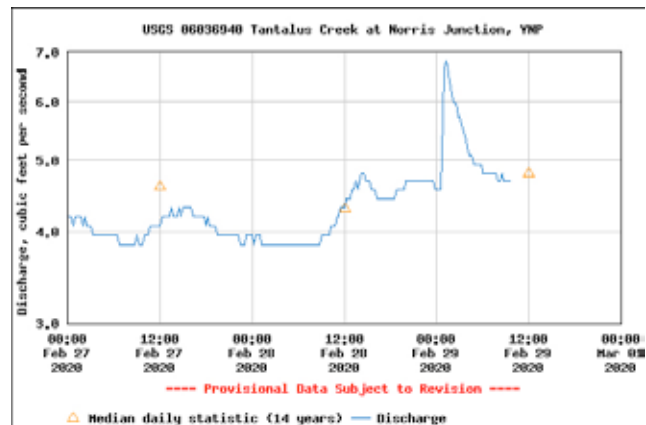


Tantalus Creek discharge graph showing Steamboat Geyser’s 5:23 PM major eruption on 12 February 2020. [Caption and screen capture by JSJ]

28 Feb 2020 @2332E by ChrisG. Geysertimes eruption #1160756 | **ERUPTION** | YNM seismogram

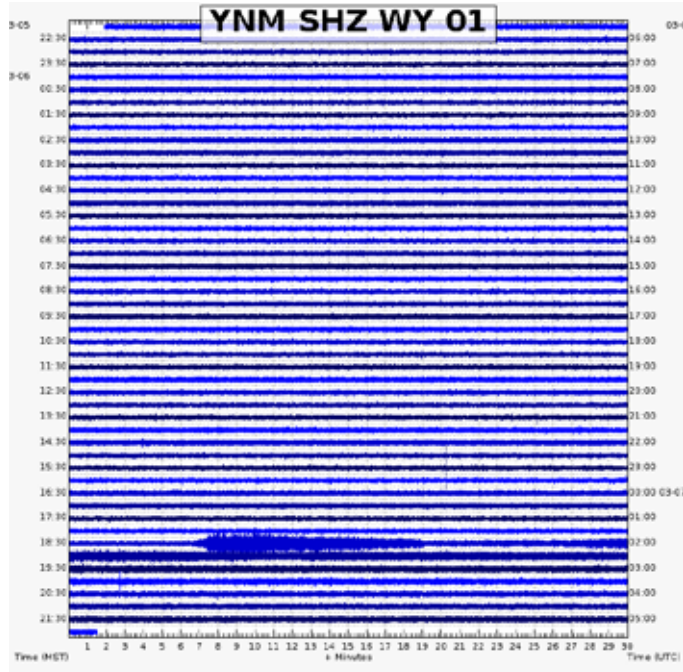


Norris Museum seismogram showing Steamboat Geyser’s 11:32 PM major eruption on 28 February 2020. [Caption and screen capture by JSJ]

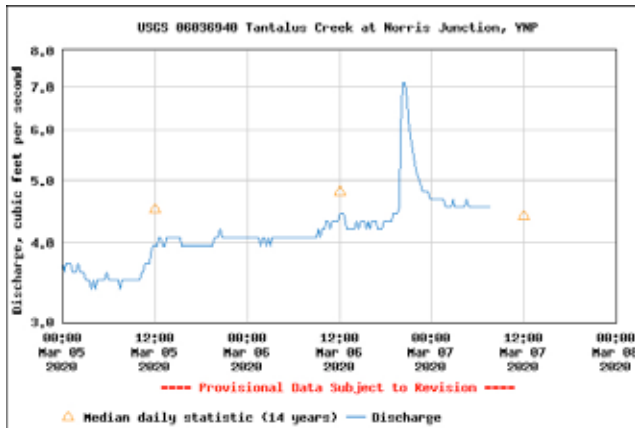


Tantalus Creek discharge graph showing Steamboat Geyser’s 11:32 PM major eruption on 28 February 2020. [Caption and screen capture by JSJ]

06 March 2020 @1836 E by nlydeen. Geysertimes eruption #1161217 | ERUPTION | YNM seismogram | Comment by udo: 87th of the current active series

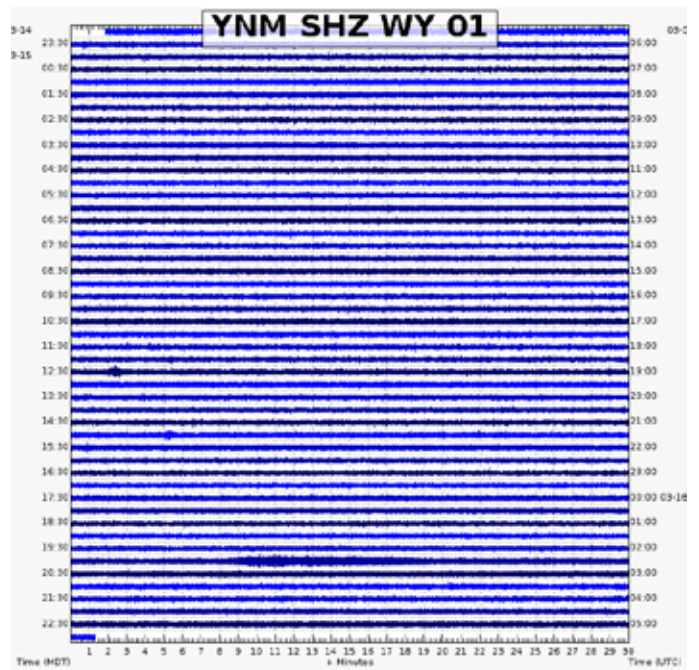


Norris Museum seismogram showing Steamboat Geyser's 6:36 PM major eruption on 6 March 2020. [Caption and screen capture by JSJ]

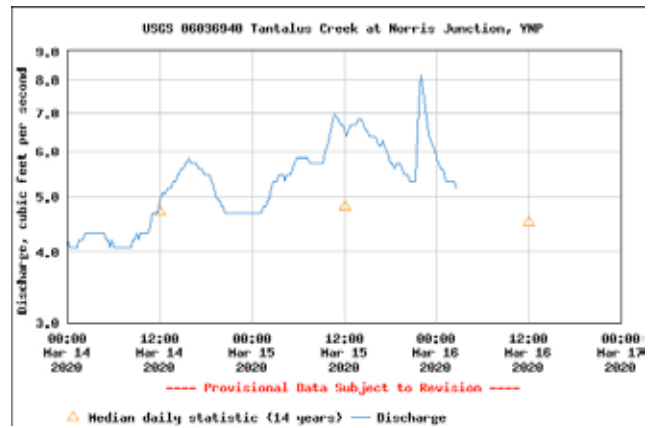


Tantalus Creek discharge graph showing Steamboat Geyser's 6:36 PM major eruption on 5 March 2020. [Caption and screen capture by JSJ]

15 Mar 2020 @2008 E by EmilyW. Geysertimes eruption #1161861 | ERUPTION | YNM seismograph, see attachments | Comment by udo: 88th of the current active series | Comment by mhreed: This should be number 88 - unless you know about an eruption I don't ;)

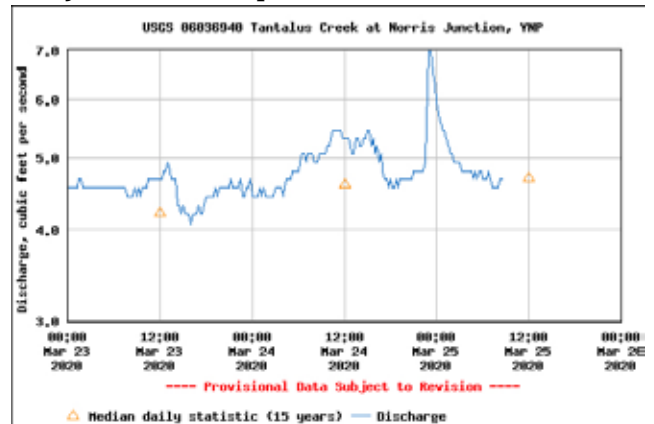


Norris Museum seismogram showing Steamboat Geyser's 8:08 PM major eruption on 15 March 2020. [Caption and screen capture by JSJ]

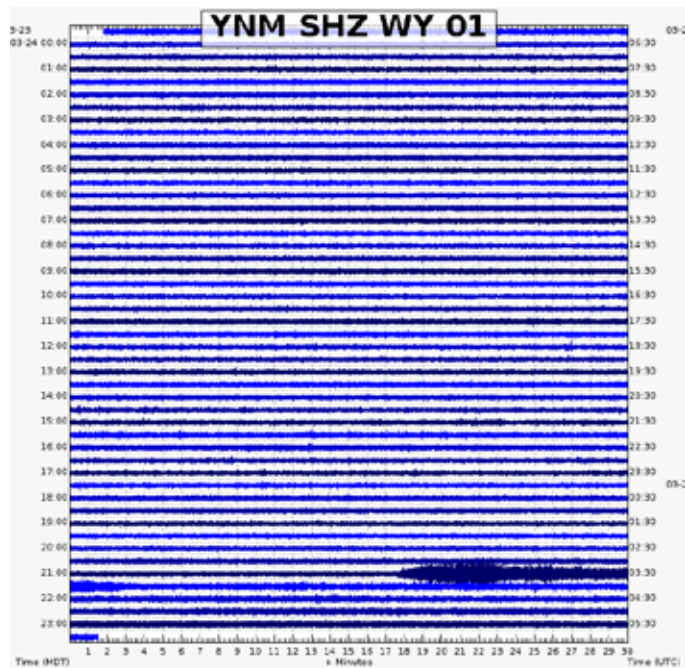


Tantalus Creek discharge graph showing Steamboat Geyser's 8:08 PM major eruption on 15 March 2020 [Caption and screen capture by JSJ]

24 Mar 2020 @2117 E by ypcaribou. Geysertimes eruption #1162354 | ERUPTION | YNM Seismo | Comment by udo: 89th eruption of the series.

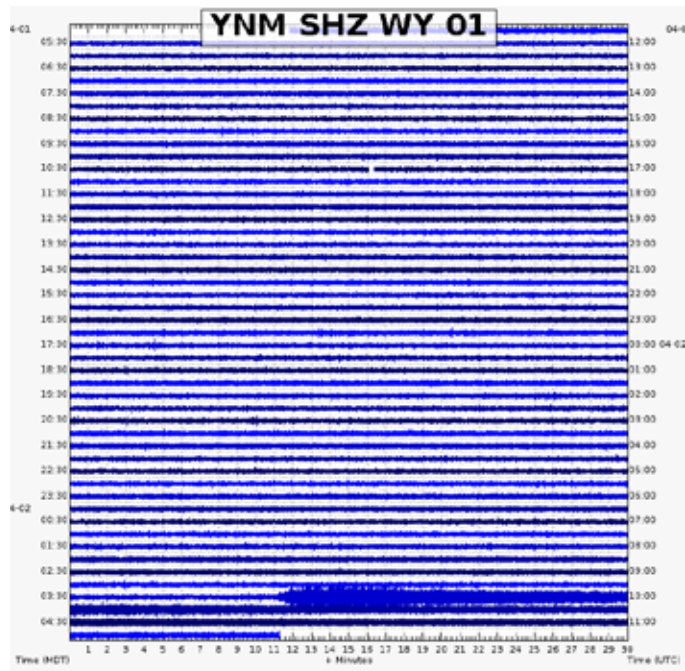


Tantalus Creek discharge graph showing Steamboat Geyser's 9:17 PM major eruption on 24 March 2020. [JSJ]

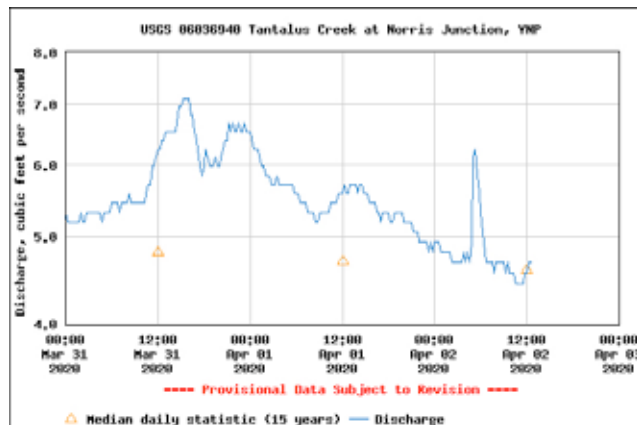


Norris Museum seismogram showing Steamboat Geyser's 9:17 PM major eruption on 24 March 2020. [Caption and screen capture by JSJ]

02 Apr 2020 @ 0341E by Polly. Geysertimes eruption #1162749 | ERUPTION | Per YNM seismograph | Comment by udo: 90th of the current active series

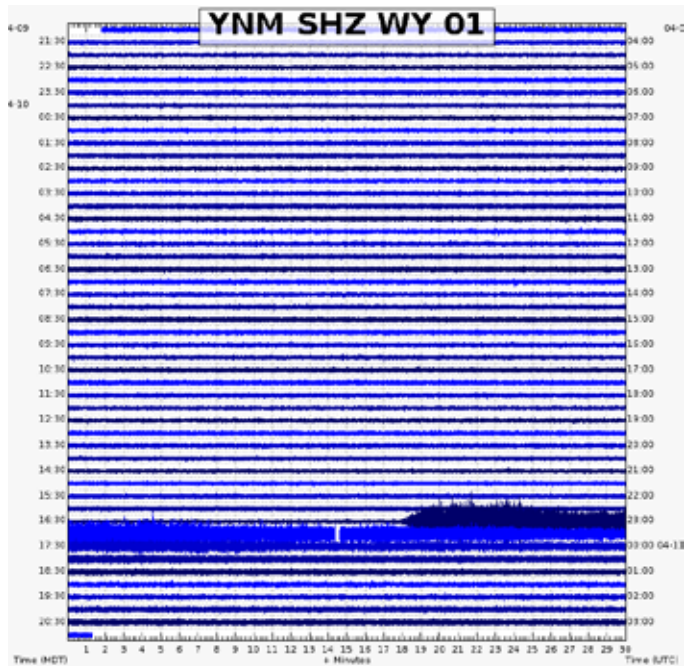


Norris Museum seismogram showing Steamboat Geyser's 3:41 AM major eruption on 2 April 2020. [Caption and screen capture by JSJ]

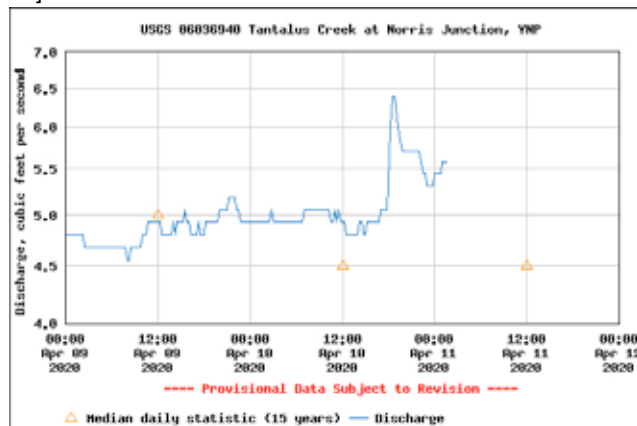


Tantalus Creek discharge graph showing Steamboat Geyser's 3:41 AM major eruption on 2 April 2020. [Caption and screen capture by JSJ]

10 Apr 2020 @1647 E by EmilyW. Geysertimes eruption #1163633 | ERUPTION | YNM seismograph, see attachments | Comment by udo: 91st of the current series.

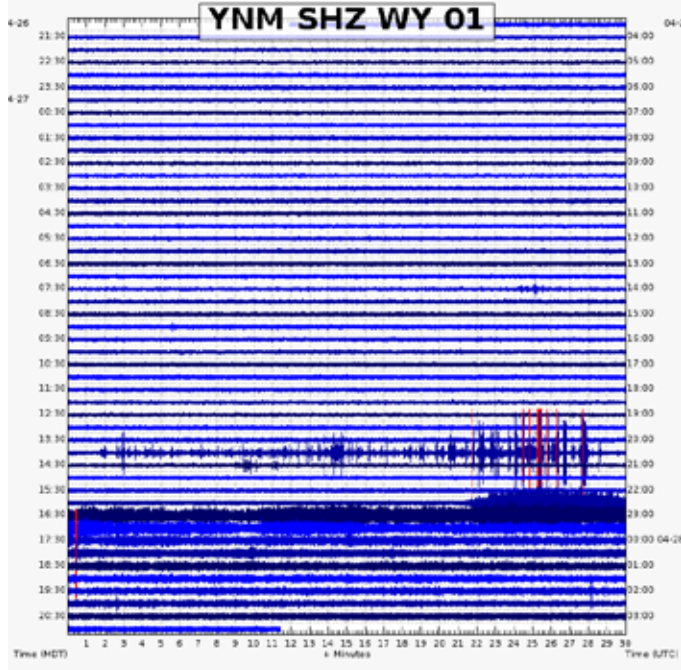


Norris Museum seismogram showing Steamboat Geyser's 4:47 PM major eruption on 10 April 2020. [Caption and screen capture by JSJ]

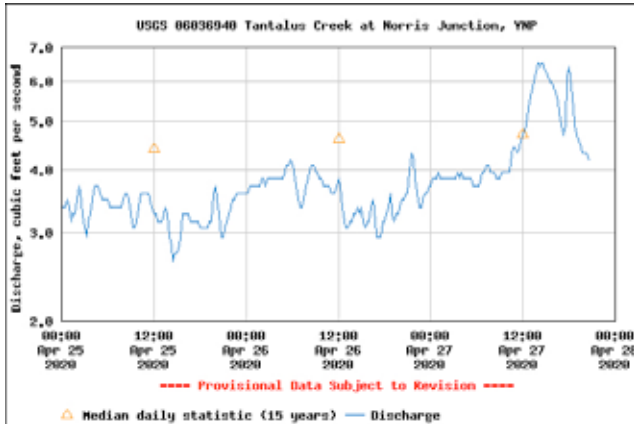


Tantalus Creek discharge graph showing Steamboat Geyser's 4:47 PM major eruption on 10 April 2020. [by JSJ]

27 Apr 2020 @1621 E by nlydeen. Geysertimes eruption #1165492 | ERUPTION | YNM seismogram | Comment by udo: 92nd of the current series.

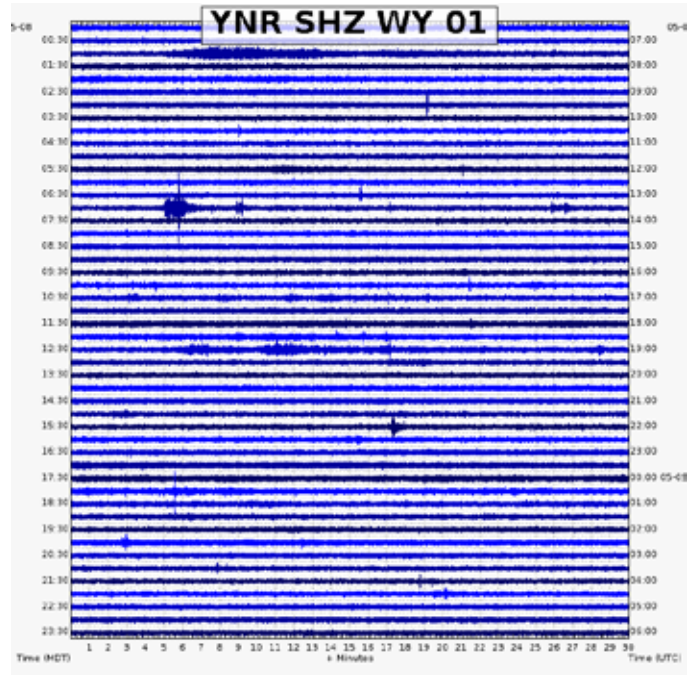


Norris Museum seismogram showing Steamboat Geyser's 4:21 PM major eruption on 27 April 2020. [Caption and screen capture by JSJ]

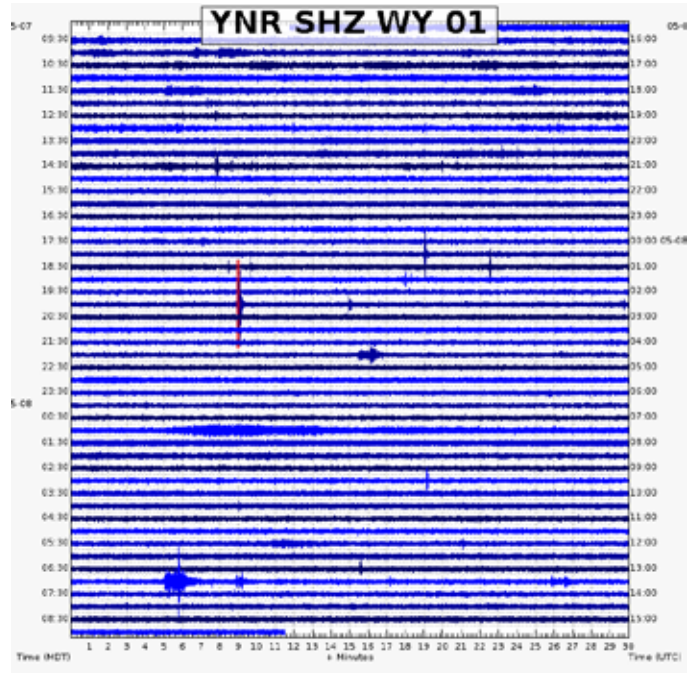


Tantalus Creek discharge graph showing Steamboat Geyser's 4:21 PM major eruption on 27 April 2020. [Caption and screen capture by JSJ]

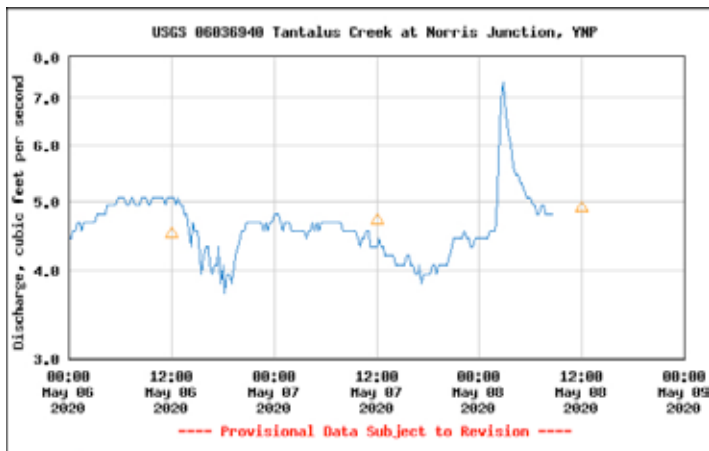
08 May 2020 @0105 E by enurst. Geysertimes eruption #1166923 | ERUPTION | Suggested by signal on the YNR seismogram and supported by a spike in the Tantalus Creek discharge a bit later. | Comment by JSJ: Rattiness of Norris Junction's seismic signal starts at 1:04 AM. Zoom in to see. | Comment by udo: 93rd of the current series. | Confirmation by Underarockphoto.



Comment by enurst on the above attachment: https://www.isthis-thingon.org/Yellowstone/wrapper.php?file=YNR_SHZ_WY_01-20200508.png Link to seismogram. I see below that 0104 is suggested as starting time. However, if you hide everything to the right of a vertical line set at the 5 minute mark, you cannot see the signal, but you can see it if the line is moved to the 6 minute mark. Therefore I think 0105 is the most correct time. I am about as far from an expert as you can get, though, so will change the time if a good argument is put forward.

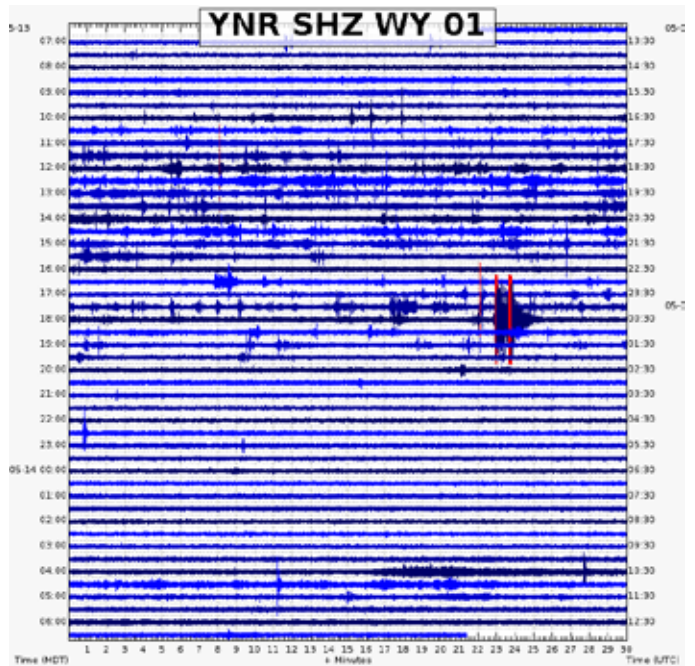


Norris Junction seismogram showing Steamboat Geyser's ~1:04 AM major eruption on 8 May 2020. [Caption and capture by JSJ]

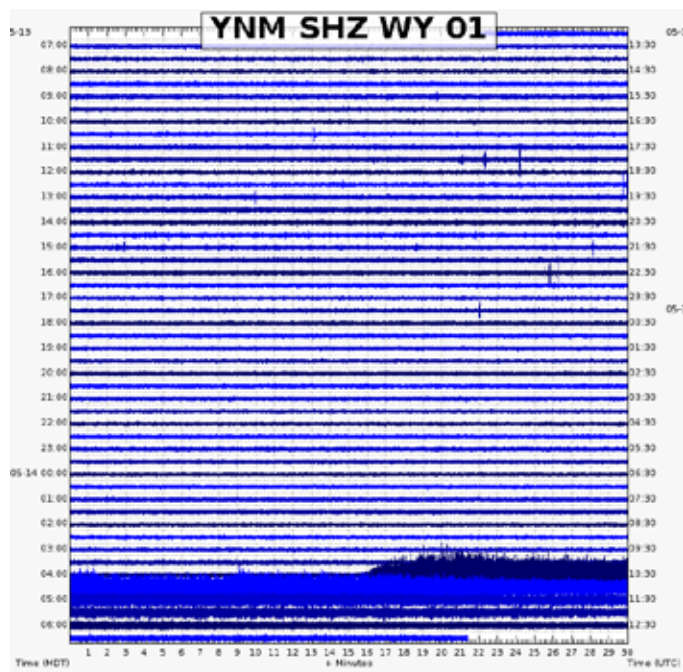


Tantalus Creek discharge graph showing Steamboat Geyser's ~1:04 AM major eruption on 8 May 2020. [Caption and capture by JSJ]

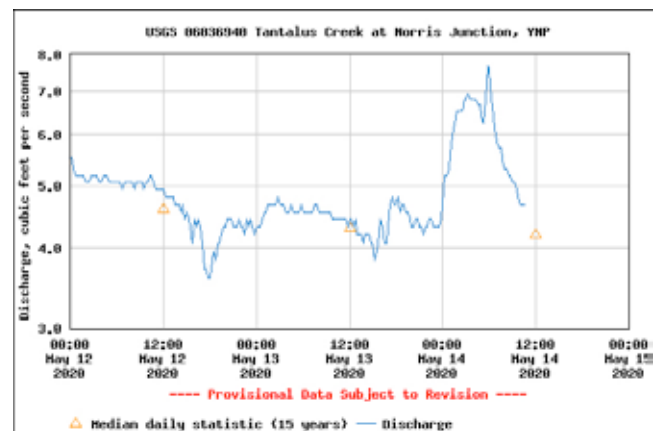
14 May 2020 @0416 E by nlydeen. GeyserTimes eruption #1167666 | ERUPTION | YNM seismogram | 94th of the current series. | Comment on all three following attachments by JSJ: Tantalus Creek discharge graph showing Steamboat Geyser's ~4:16 AM major eruption on 14 May 2020.



Norris Junction seismogram showing Steamboat Geyser's ~4:16 AM major eruption on 14 May 2020. [Caption and screen capture by JSJ]



Norris Museum seismogram showing Steamboat Geyser's ~4:16 AM major eruption on 14 May 2020. [Caption and screen capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's ~4:16 AM major eruption on 14 May 2020. [Caption and screen capture by JSJ]

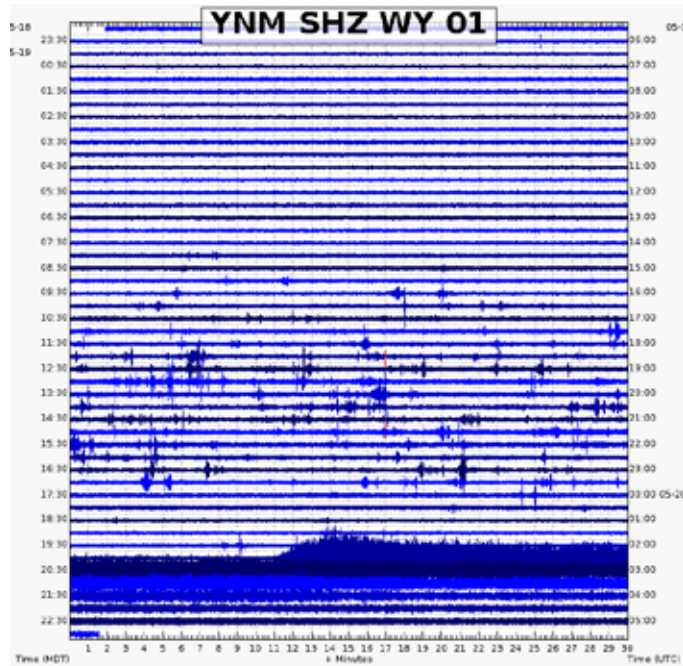
16 May 2020 @1507 by Janet Jones. GeyserTimes note #14192 | Gently steaming. Cistern spring appears to be full and overflowing as seen from a flight over the park. Photos will be posted to the FB group and to the Google group.

19 May 2020 @1050-1150 by Janet Jones. GeyserTimes note #14214 | 1058 Almost woohoo - 1104 woohoo!! - 1107 Attempted woohoo - 1118 Cistern overflowing - 1120 at steerage water covering what was Elvis & a trickle down what now looks like waterfall canyon at the other bridge at steerage. Then it calmed so at Old Faithful area.

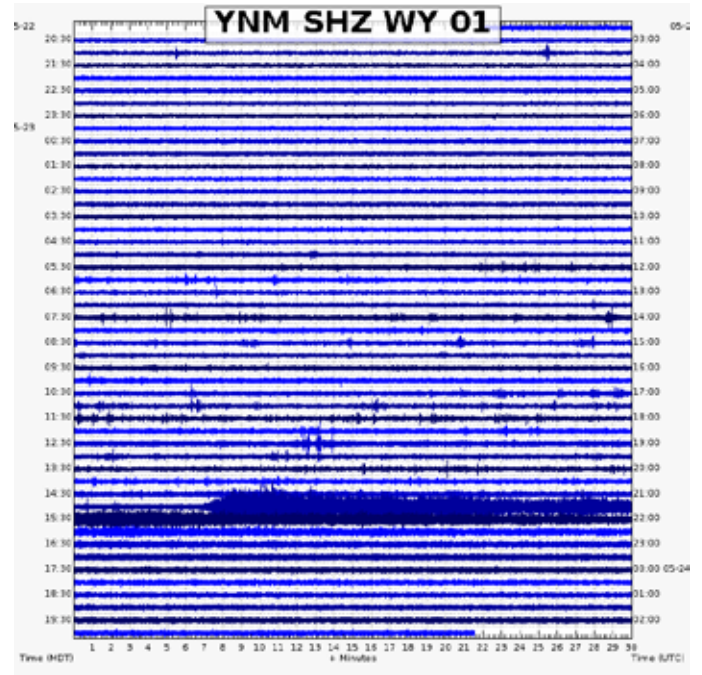
19 May 2020 @2011 E by K.Cooper. GeyserTimes eruption #1168482 | ERUPTION | YNM Seismogram | Confirmed by markwolf | Comment by udo: Number 95 of the current series. | Comment by markwolf: caught the

start from the campground trail with ranger mcilwain, felt the rumble, saw the water, and began to run! got drenched on the approach. beautiful steambow. powerful as ever. super clean/white. no rocks seen. didn't overflow the bridge. smooth transition from water to steam after about 20 minutes. also I believe start time was a little closer to 2010

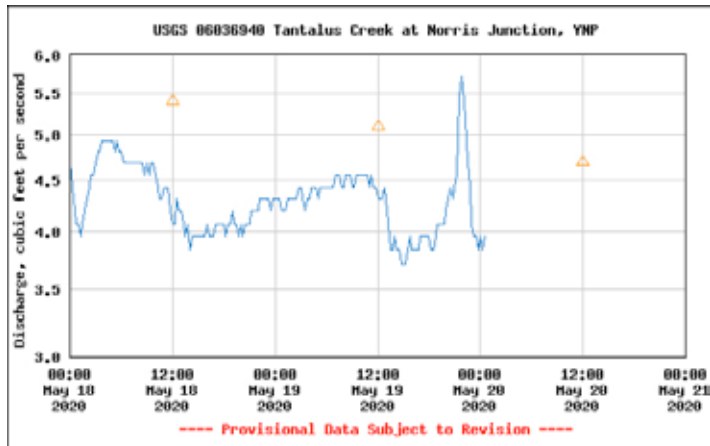
carving new channels into the path past the bridge. no bridge overflow. Water back in North vent at 1610. per ranger mcilwain, it wasn't doin much at 900 this AM.



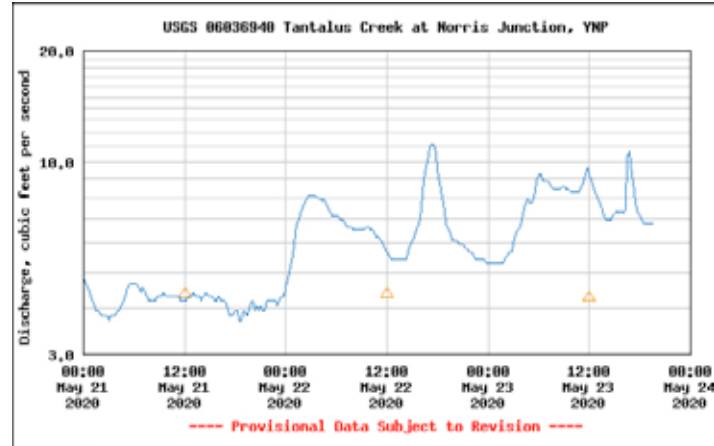
Norris Museum seismogram showing Steamboat Geyser's ~8:11 PM major eruption on 19 May 2020. [Caption and capture by JSJ]



Norris Museum seismogram showing Steamboat Geyser's mid-afternoon major eruption on 23 May 2020. [Caption and capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's ~8:11 PM major eruption on 19 May 2020. [Caption and capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's mid-afternoon major eruption on 23 May 2020. [Caption and capture by JSJ]

23 May 2020 @1507 E by nlydeen. GeyserTimes eruption #1169120 | ERUPTION | YNM seismogram | Confirmed by markwolf | Comment by K.Cooper: 3rd shortest interval on record. Following behind June 19th (3d 9h 40m) and June 15th (3d 3h 48m) | Comment by udo: 96th eruption of the current series! | Coment by markwolf: heard/felt the rumble of the start while in porcelain basin. start time looks accurate. 6" of snow on boardwalk so did not run. Arrived at 1530, already in steam. Seemed a little lower power for that point in eruption. Runoff was all well east of "normal" and

26 May 2020 @1000-1300 by Janet Jones (observations by Jens Day). GeyserTimes note #14245 | Jens Day said Steamboat was very active from 1000 to 1300. At about 1300 it made a very strong attempt to erupt and then quieted down after that.

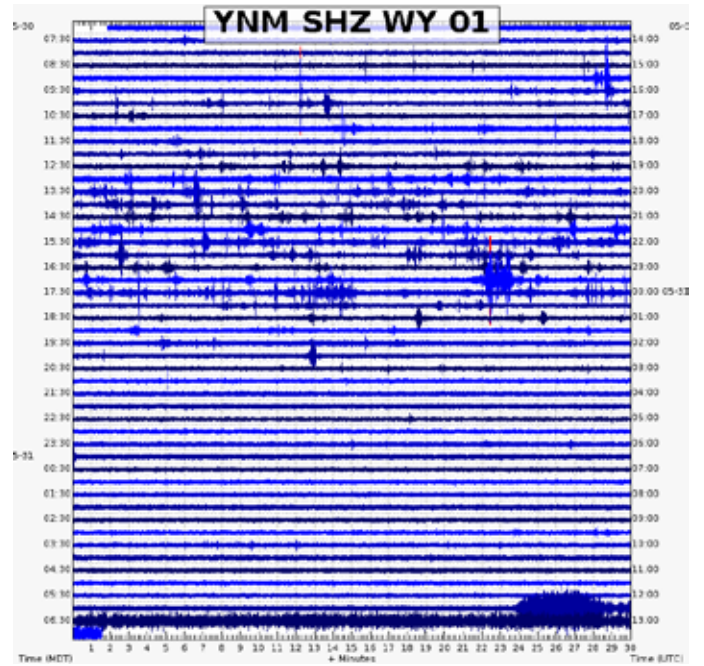
27 May 2020 @1759 by Mkeller. GeyserTimes note #14248 | Between 0620-1700 no vertical play from North. A few sustained surges with both vents with good overflow but never any sense it wanted to erupt.

28 May 2020 @0545-1920 by Suzanne. Geysertimes note #14249 | Slight improvement from yesterday. South Vent had occasional heavy minors producing babbling brook, but North Vent did not show much interest until 1903 when it had a decent vertical surge (30 ft) with a follow up about 1 minute later. But afterwards activity subsided.

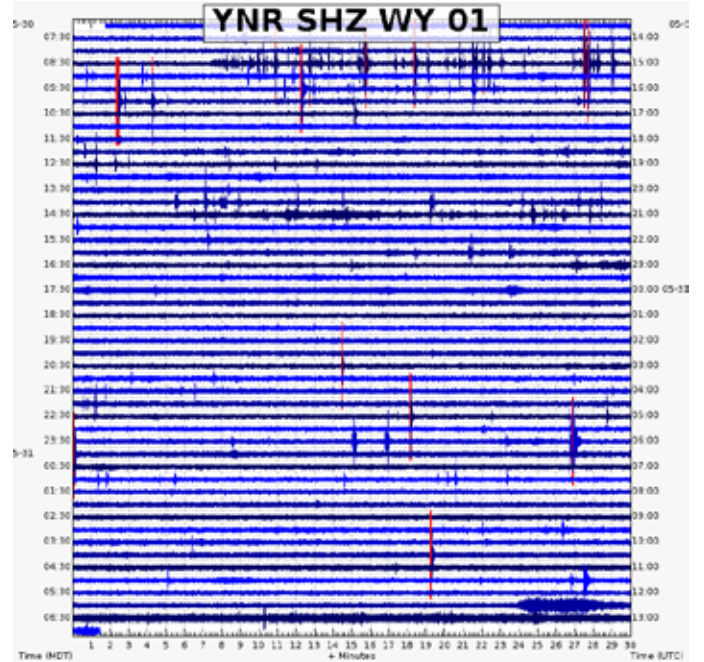
29 May 2020 @0750 by ypcaribou (observer was Delaware North floor crew). Geysertimes note #14250 | “No Steamboat yet but basin smelled very sulfery when drove by.” (He means more than usual.) Time approximate; texted from Cygnet Lakes trailhead at 0800.

30 May 2020 @0545-1930 by Suzanne. Geysertimes note #14457 | More improvement from yesterday. Strong minors observed at 0629, 0810 with followup at 0817, 0919, 1247, 1544, 1545, 1547, and 1842. The series starting at 1544 was very strong with North Vent granding. But in all cases the minors ended with South Vent taking off and killing North. Several raging rivers observed throughout the day, even during the times outside of the pushes.

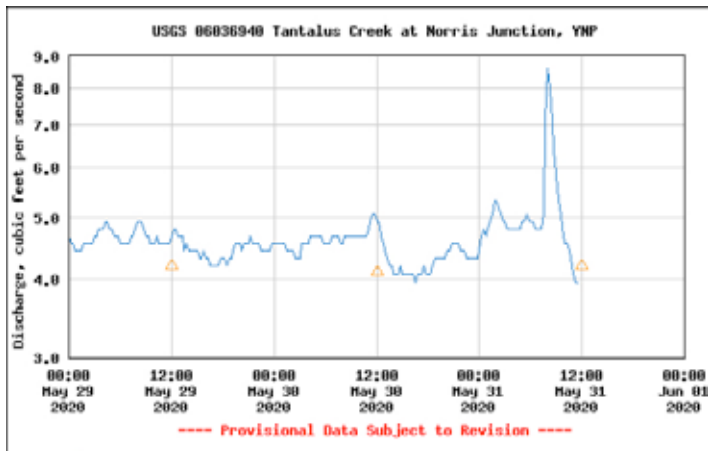
31 May 2020 @0623 by Suzanne (observers were Suzanne Strasser, Kitt Barger, Carol and Bill Beverly). Geysertimes eruption #1194967 | ERUPTION | Confirmations by cb and bbev | Steamboat erupted on the first truly sustained push event seen in my 4+ day wait. 0611 and 0612 North Vent thick short verticals to the height of the trees, followed by South Vent taking over with raging river runoff. 0615 strong South Vent minor producing raging river but not much out of North. 0617, 0621, and 0622 very strong concerted minors with North Vent to 40+ feet, followed by the eruption start at 0623. 5 minutes into the eruption North Vent started bursting action but there was never a full choke. Bursting continued from North Vent with strong continuous South Vent for the next 55 minutes. At almost exactly 0723 there was a slight wind shift and North Vent roared into steam. I did not get a height measurement but estimate the tallest bursts from North Vent were about 380 feet. Viewing conditions were excellent from both platforms with wind blowing away from us. There was no fog and the sun rose from behind the hill for a beautiful backlit eruption. When we left the platform at 1047, Steamboat was still in strong steam phase with no attempts to revert back to water. | Comment by udo: 97th eruption of the current series. | Secondary entry by nlydeen @0623 E YNM seismogram.



Norris Museum seismogram showing Steamboat Geyser's 6:23 AM major eruption on 31 May 2020. [Caption and capture by JSJ]



Norris Junction seismogram showing Steamboat Geyser's 6:23 AM major eruption on 31 May 2020. [Caption and capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's 6:23 AM major eruption on 31 May 2020. [Caption and capture by JSJ]

01 June 2020 @1737 by ypcaribou (observer Lori S). **GeyserTimes note #14499** | Quietly steaming. Dead & dying trees in an approximate 200 ft radius around SB's vents. Including the one shade tree at the middle platform which is still upright but has red needles. Can now see middle platform in full from upper, trees on switchback trail to cistern thinning. Can almost see middle deck from steorage. Not yet but view up south vent channel has widened considerably.

01 June 2020 @1815 by cb. **GeyserTimes note #14477** | Steamboat is quiet and gently steaming. All channels are dry. The trough or what i will now call the channel is full of small rocks and debris. The big boulder that WAS in the channel is no longer there and now is off to the west side of the bridge in the grass.

02 June 2020 @0727-0750 by bbev. **GeyserTimes note #14488** | 2D, 1 hr post eruption: some deep, soft grumbling and billowing steam. CS: pool is full and overflowing as expected with gentle boil. Heavy runoff to the NW, well into the trees. Also good runoff into muddy pool and channel to the south. 0747 some huffing from both vents. No water seen in brief observation.

02 June 2020 @0810-0922 by ypcaribou (observer Lori S). **GeyserTimes note #14490** | Huffing deep in vents on arrival. First audible water inside vents at 0814. First visible water jet at 0922. (I walked to Monarch & back in between so 0922 is just first burst I personally saw when I got back.) Vent area damp, including ET & Jabba. One bbev sighting around 0800 on the walk down.

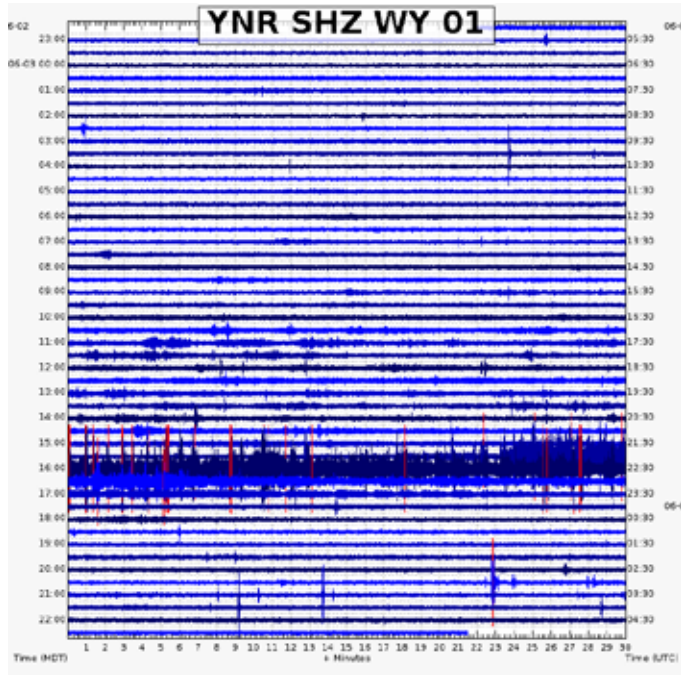
02 June 2020 @1720-1831 by bbev. **GeyserTimes note #14507** | 2D, 11hrs post eruption. Splash from SV at 1725, again at 1730 SV 5' splash. 1736 NV jet to 10'. Both vents continued, individually and occasionally concerted. Several splashes reached 10' At 1820, noticed that SV runoff beginning to become damp and slowly creeping down the channel. Upper 10' of channel is wet.

03 June 2020 @0750-0757 by ypcaribou (observer Lori S). | Had a good, sustained push (as seen from Steorage)

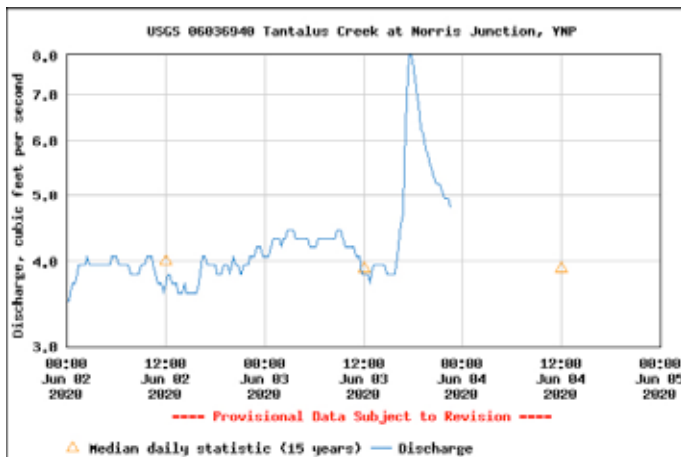
about 0754 that sent a rush down to Steorage. Bigger than a brook but not yet a river. Just prior and during, the steam columns for Cistern Spring, Tantalus Geyser, Echinus Geyser, and several features in the southwest Back Basin all got noticeably VERY tall very fast. After the push, Steamboat quieted way down and the aforementioned steam columns all returned to "normal for a cool morning."

03 June 2020 @1552 by RMichaels (Observers: RMichaels, Bill Beverly, Carol Beverly for the start. John Lucas came later for restarts). **GeyserTimes eruption #1196485 | ERUPTION** | Confirmed by: hurleyintjl, bbev, cb | Duration of water phase was 26 minutes | SV shoulder and back channel had flowing water on arrival at 0825. Activity progressed consistently throughout the day with only a few short lulls. Final push started around 1353 and slowly built over the course of two hours. SV began having sustained "fountaining" minors 20-30 min. prior to eruption. North followed suit and increased in volume, height, and vertical. There were at least two "wall of water" minors in the five minutes prior to the eruption. I did not note times because I was trying to record video and also brace for the incoming thunderstorm. Eruption at 1552 beat the onset of the storm by 2-3 minutes. The eruption was not that tall (for Steamboat) due in part to the high winds. Heavy rain gave way to two rounds of hail-sized hail during the 26 min. water phase. North transitioned to steam at 1618. It transitioned back to water 1700, followed by full pauses and restarts at 1701 and 1702. It again reverted to steam at 1708, then went back to water at 1710. It had additional pauses and restarts at 1711, 1714, 1715, 1717, 1718, 1720, and 1721. Total of nine pauses and restarts. Great rainbows and drenching of the platforms once the sun came out during steam phase. In full steam phase when I left just after 1800. | Comment by udo: 98th eruption of the current series. | Comment by hurleyintjl: I can now say that I was there! =) | Comment by bbev: Arrived a little after 10, having noticed a rather large steam column at Norris intersection coming from SB earlier that morning. My first noted activity was at 10:36 & 10:38 with concerted vertical minors with moderate, audible runoff (babbling brook). Russell reported stronger activity from earlier in the morning. At this point there was no choice but to stay! This activity continued throughout the morning; strong, SV dominated, ~50% concerted, occasional NV & SV vertical, with moderate SV runoff. There were several quiet periods of 15-20 minutes with no notable activity. At 13:58 activity increased to slightly more concerted play, more vertical play from both vents and increased volume from SV. SV initiated most concerted minors, or were solo with increased girth, looking very "fountainous" as described by CB. Runoff was also remarkably improved to Heavy (raging river). Several noted as H+ runoff. 14:56 noted as "huge SV fountain H++". Next note at 15:13 began a gradual increase in activity leading to another "SV fountain w H++" at 15:36 which was beginning of build up to eruption. 15:38, 15:41, 15:45, 15:48 and 15:50 and erup-

tion at 1552. By 1600 we were being pelted by pea sized hail. I would add that the 3rd and 4th restarts were close to 200' IMO. | Secondary entry @1553 E by ypcaribou - Tantalus spike agrees with YNR. Waiting for in-basin confirmation.



Norris Junction seismogram showing Steamboat Geyser's 3:52 PM major eruption on 3 June 2020. Can definitely see pauses & restarts between 5:00 & 5:30 PM on the seismic signal [caption and capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's 3:52 PM major eruption on 3 June 2020. [Caption and capture by JSJ]

04 June 2020 @1130 by cb. Geysertimes note #14533 | Steamboat is quiet, gently steaming. No sounds or water from either vent. There is some pooling of water in small depressions in the South channel otherwise that run off is dry. A trickle of water down the north channel. There are 2 more dead trees in the north channel just below the boardwalk. FYI the Norris area lost power yesterday afternoon and is still out as of the posting.

05 June 2020 @0750-0855 by bbev. Geysertimes note #14549 | 1D, 16hrs post eruption: NV jetting wispy 10'

every 5-12 min. SV only steam and no water from vent or in runoff.

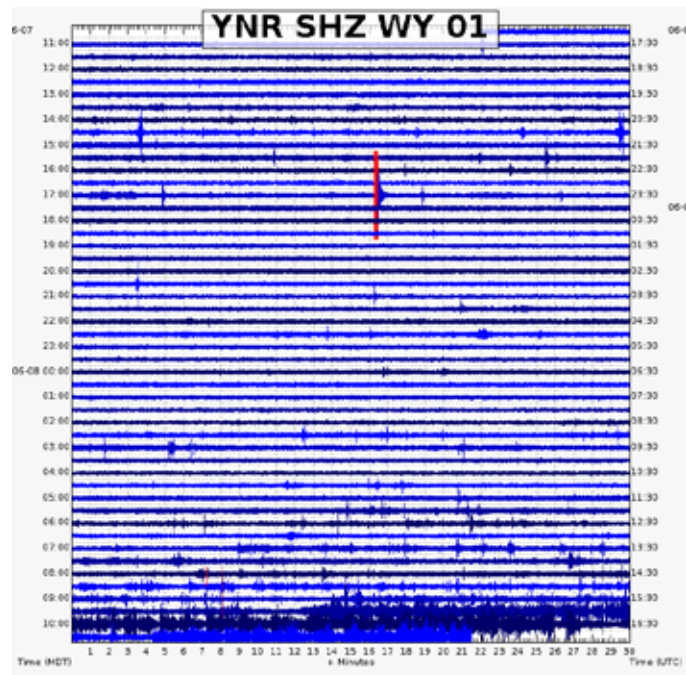
05 June 2020 @1954-2010 by bbev. Geysertimes note #14553 | 2D, 4hrs post eruption: Little if any change, 2 wispy jets from NV and 1 from SV. SV runoff is bone dry.

06 June 2020 @1040-1320 by RLJones. Geysertimes note #14555 | Both NV & SV started showing water at 1110. By 1125 NV was having max bursts to 20ft and SV to about 8ft. At 1155 SV was having a few bursts to 10-15ft. By 1228 SV was still 10-15ft with NV still at 20ft max. Between 1155 & 1320 SV had created three light stream flows with small gravel. Color was still clear. At no time were there any vertical or near vertical plays from either vents.

06 June 2020 @1045 by RMichaels (observers bbev, cb). Geysertimes note #14554 | Only stayed long enough to talk with Carol and Bill Beverly and to make a brief inspection. South Vent's runoff channel is barely wet to bridge. According to Bill and Carol, water first reached the bridge about 15 min prior to my arrival. There is water in the system, but the minors I saw did not have much volume.

07 June 2020 @0820-1850 by bbev. Geysertimes note #14562 | Radio call of good activity with vertical minors early so we packed up and went over. Frequent concerted angled minors with occasional vertical from both vents. NV more active in the morning with tall jets and wispy vertical play. SV mostly angled with maybe hourly vertical play. runoff moderate with only a few increases. Activity increased slowly over the afternoon after heavy snowfall and off and on sleet and rain. Several concerted vertical minors with increased runoff occurring hourly. 1635 was an "out of your chair" sustained minor with follow up at 1638, both given the only Heavy + ratings for runoff in my book. Concerted play continued with slight increase in frequency and decrease in vertical activity in NV. Noted that at steerage, in the trough and below the bridge, were clusters of very tiny, black, live bugs, being washed down the channel. We are referring to them as Steerage Fleas.

08 June 2020 @0942 by underarockphoto. Geysertimes note #14566 | YNR trace showing what looks like a Steamboat eruption but is not. There is one at 0942 and another at 1034. [below]



08 June 2020 @1048 by WillBoekel (observer RL-Jones). Geysertimes note #14565 | satellite call to me saying no steamboat yet.

08 June 2020 @1155 by underarockphoto. Geysertimes note #14568 | Should in basin observers get the chance; any guesses on what is causing the Steamboat-like traces on YNR? The event yesterday was pretty obviously a rainstorm/hailstorm.

08 June 2020 @1737 by User34 (Observers: Will! Demetri S, Carol & Bill B, Lori S, Bob J, William R, Lori & Steve Grasso, Tom & Christine Denio). Geysertimes eruption #1197251 | ERUPTION | Duration of 28 minutes [water phase] | B.C. vent was POURING out water for the first part of the eruption. Main vents went to steam at 1805, water back at 1912. First choke at 1925, south never quite quit, and again at 1927, 1929, 1930, 1932, 1934, 1937, 1938, 1941, 1942. North back to steam 1945, south at 1947 | Confirmed by K.Cooper |

Secondary Entry #1 @1738E by underarockphoto. Geysertimes eruption #1197244 - Leaving a "?" because there have been two false alarms on YNR. This trace has a substantially different pattern and more of the balloon style start to SB's traces. Oh, and I am excited for my best friend, So GO WILL!!!!!! Updated to reflected confirmed in basin entry. Please note the trace appeared before the inbasin reported time, please cede to the in basin report time. Congrats, Will. I am so happy for you, my friend. - Confirmed by ypcaribou.

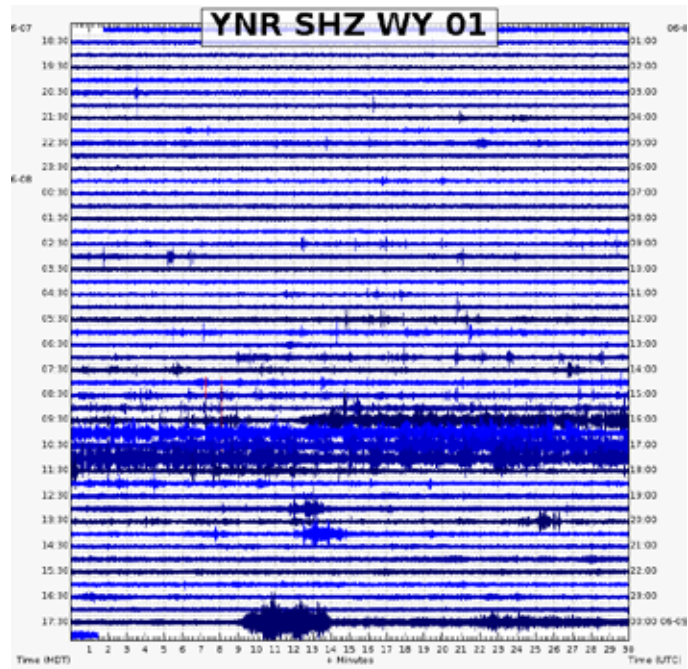
Secondary Entry #2 @1738ns by ypcaribou (observers Lori S, Will B, Demetri, bbev, Bob, others). Geysertimes eruption #1197248 - Drafted a text (for sending later)

time-stamped 1744. Went right after. Heavy graupel. Perfect Steamboat weather. Update: Rechecked time stamp on first video which is 1740. Started a minute or two before so guessing 1738. YNR matches that. Deferring to those that checked a watch at the actual start. I did not.

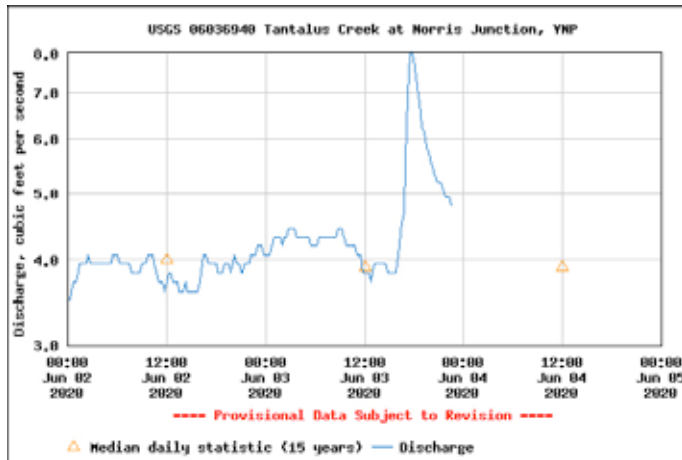
Secondary Entry #3 @ 1737ns by K.Cooper (Observers KorbenC, Bill, Carol, Will, Demetri, LoriS, Lori, others). Geysertimes eruption #1197252 - observed start from parking lot, 11 restarts, details in a bit.

Secondary Entry #4 @1737 by cb (observers: Will! Demetri, William, Bob J, Steve and Lori Grasso, Carol and Bill). Geysertimes eruption #1197253 - Duration 28 minutes - Confirmed by William - 1805 steam phase, 11 restarts. please see Demetri's post for the restart times. Went to steam at 1805, water back at 1912. First choke at 1925, south never quite quit, and again at 1927, 1929, 1930, 1932, 1934, 1937, 1938, 1941, 1942. North back to steam 1945, south at 1947. The eruption started in a snow squall and we left after the sun came out and we had BEAUTIFUL rainbows. We are working to find out why the YNR is showing those traces! Please be kind! - Comment by William: The yellow and black song bird mentioned in the notes on 6/1/2020, which is now a decaying carcass of a bird was washed off the hill to left of the trail to the other side during this eruption.

Secondary Entry #5 @1737 by WillBoekel. Geysertimes eruption #1197255 | Confirmation by ypcaribou.



Norris Junction seismogram showing Steamboat Geysert's 5:37 PM major eruption on 8 June 2020. [Caption and screen capture by JSJ]



Tantalus Creek discharge graph showing Steamboat Geyser's 5:37 PM major eruption on 8 June 2020. [Caption and screen capture by JSJ]

09 June 2020 @0948 by bbev. Geysertimes note #14572 | 16hrs post eruption; quiet and steamy, no water. CS is low, 3' below rim of "tube", no steam, no boil. water level 3" below wet line on sides of tube, and just above the cave on south side.

11 June 2020 @0754 by cb (observers: cb & bbev). Geysertimes note #14590 | As of last nights 2D 2H post eruptive mark, water came back into SB last night (6/10) @ 1915 with a wispy 7' NV jet. Cistern Spring's pool is very high and overflowing in all directions

11 June 2020 @0905-1005 by bbev (observers cb, Craig, GERALYNN). Geysertimes note #14595 | 2D, 16 hrs post eruption; Sv active with light runoff, water trickling down shoulder and back runoff. 0912 One concerted minor with some NV "bounce" and short sustained vertical Sv. Sv dominated play for rest of the hour, no further vertical seen from either vent. CS is high and overflowing in all directions.

11 June 2020 @1740-2130 by bbev (observers: CB, Craig, Gerilynn, John). Geysertimes note #14604 | 3D post eruption; Sv dominated most of the activity with quite a number of SVertical solo play with moderate runoff. Concerted play with tall, thickk, angled Nv, just shy of vertical. Several concerted NVertical minors during the 1900 hour, finishing at 2005 with a crowd cheering minor that failed to climb past 50', and did put the only Heavy+ runoff in my book. 2025 was last CN-VSVH, followed by several SVSolo before dark.

12 June 2020 @0600-2120 by cb (observers: Craig, GERALYNN, William, Korban and Dad, and myself). Geysertimes note #14622 | We had a few nice, stand on your feet minors, but they were brief and none of them were sustained or had good follow up.

12 June 2020 @0614-0912 by ypcaribou (observer Lori S). Geysertimes note #14608 | Sent a few good surges down the SV channel as seen from Steerage at 0614. Looked promising. Walked to far Back Basin after to so-

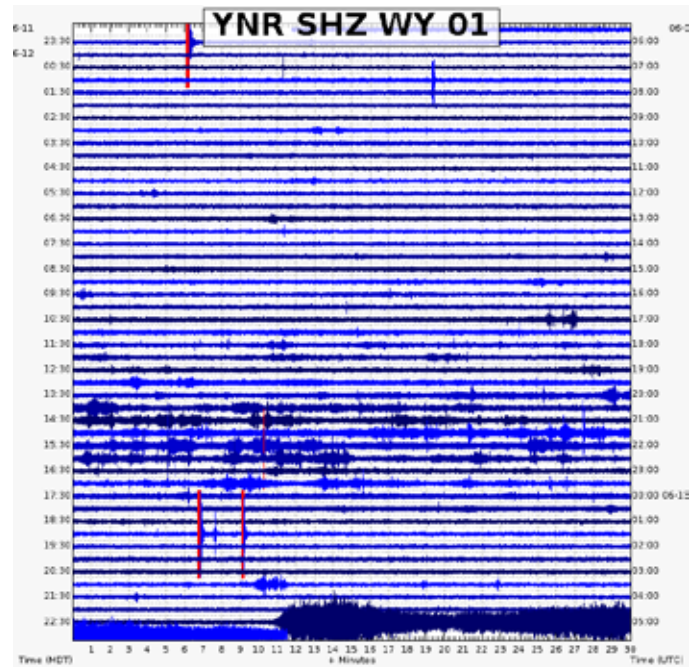
cial distance myself for a sit. From 0645 onward (as seen from far Back Basin), continued angled splashing, mostly N some S, until I left my stakeout location at 0845. Could not see details of minors from that far so will leave that for others to report. My stakeout location revealed the following observation: Blue Mud Steam Vent would audibly surge, followed by the same from Yellow Funnel Spring & Puff N Stuff (simultaneous). About 2 minutes later, SB would splash from N Vent to tree tops (as seen from far away). This possibly coincidental activity continued regularly from about 0645 to 0800 at which point traffic picked up on the main road and my pin-drop quiet location was no longer quiet. 0912 from Steerage, runoff had returned to a babbling brook.

12 June 2020 @1125-1834. Field notes by Janet Jones shared online at <https://yellowstonenaturalist.com/geyser-watch/a-day-at-steamboat-geyser/>

- 1125 | South Vent fountaining.
- 1127 | Good splash from both vents with a bit of fountaining from South.
- 1142 | A bit of fountaining from South Vent.
- 1149 | Nice vertical bounce from North – South fountaining.
- 1155 | Small sustained splash from South (or small fountaining).
- 1209 | South Vent fountaining. Talking and not taking notes,
- 1230 | South Vent fountaining.
- 1237 | South Vent fountaining.
- 1300 | Small fountaining from South Vent
- 1302 | North Vent vertical bounce sustained, followed by South fountaining.
- 1308 | Nice splash together from both vents.
- 1316 | South Vent fountaining.
- 1317 | Small fountaining from South Vent.
- 1323 | Vertical bounce from North Vent. South vent fountaining.
- 1325 | South Vent fountaining.
- 1327 | South Vent fountaining.
- 1332 | South Vent fountaining.
- 1333 | Percussion heard.
- 1334 | South Vent fountaining.
- 1336 | Percussion heard. North and South Vent started simultaneously.
- 1337 | VERY NICE TRY. Suddenly both vents shot vertically to the tops of the trees. Those at Steerage reported the overflow to be a 3.5 that wet the grassy knoll channel (to the right of what was "Elvis").
- 1339 | Percussion heard.
- 1341 | South Vent fountaining.
- 1400 | Quiet percussion heard followed by a nice splash from South Vent.
- 1402 | North Vent had a weak vertical splash. South Vent had light fountaining.
- 1407 | South Vent fountaining.
- 1414 | South Vent fountaining.
- 1418 | South Vent fountaining.
- 1422 | South Vent fountaining. Nicely sustained a bit longer.

1425 | North Vent splash. South Vent fountaining.
 1426 | Both vents started simultaneously with South Vent fountaining at the end.
 1430 | North Vent started with a weak splash followed by some nice splashes that had lovely verticalness to them. Didn't build, though.
 1437 | Light splashing from both – North started.
 1439 | South vent splashed.
 1441 | Both vents started simultaneously
 1445 | Rumbling seems less. Later in the same minute, it returned. How long had it been less until I noticed that?
 1454 | Both vents started simultaneously – good splash, but not sustained.
 1502 | South Vent fountaining.
 1505 | South Vent lightly fountaining.
 Talking and not taking notes.
 1528 | Nice splash from both vents (simultaneous start)
 1532 | Nice splash from South Vent
 1533 | Nice splash from both vents.
 1537 | South Vent fountaining briefly.
 1546 | Small fountaining from South Vent.
 1553 | South Vent fountaining. It seems to be doing more consistent splashing, but nothing very vertical.
 Talking and not taking notes.
 1618 | South Vent fountaining.
 1625 | South Vent fountaining.
 1626 | South Vent fountaining – North Vent tried to join in but disappeared.
 1629 | South Vent fountaining.
 Back to the car to eat dinner.
 1834 | NICE vertical from both vents. Lasted for about 30 seconds, but just didn't build.

tion of the series !! | Comment by William: Mixed water/steam phase observed at 05:00 on 6/13. Cistern 3-4" below overflow. South Vent runoff channel did not cover the bridge at Steerage. | Comment by cb: NV still jetting water 60'+ SV jetting water 25'+. @ 0600 (7.5 hours from start)

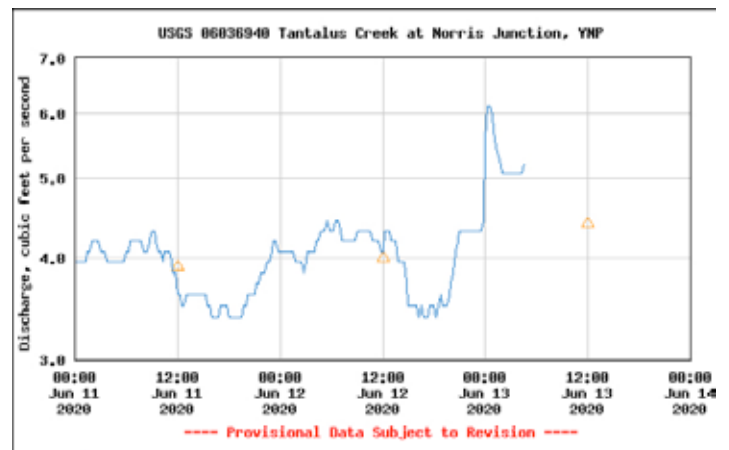


Norris Junction seismogram showing Steamboat Geyser's 10:40 PM major eruption on 12 June 2020. [Caption and screen capture by JSJ]

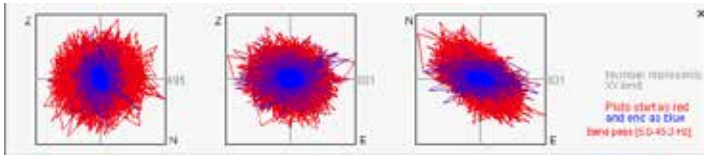


12 June 2020 @2200 by hurleyintj (observer: John). GeyserTimes note #14521 | No eruption as of 22:00

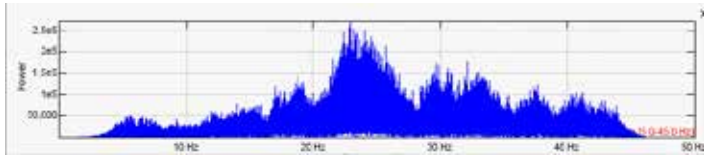
12 June 2020 @2240 E by Polly. GeyserTimes eruption #1197946 | ERUPTION | Appears to be a Steamboat trace. According to NOAA weather and also lightning maps, the weather looks like it's windy, but no other storm activity. I'll watch for Tantalus spike. Addendum: Small spike with subsequent drop off on Tantalus discharge gauge and also on Steamboat temperature graph. | Confirmed by cb, William, CraigC, K.Cooper | Comment by JSJ: 20th eruption of 2020 & 100th eruption



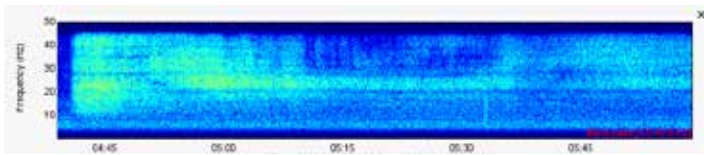
Tantalus Creek discharge graph showing Steamboat Geyser's 10:40 PM major eruption on 12 June 2020. [Caption and screen capture by JSJ]



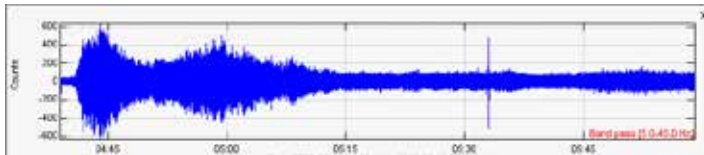
Particle Motion



Spectra



Spectrogram



Wave

[Items from a] Link to a folder containing various visualizations of this eruption from seismic data. All times are in UTC. Data is mainly from YNR's HHZ band, with particle motion also including the HHE and HHN bands.

13 June 2020 @0600-0715 by cb. Geysertimes note #14625 | 7.5H from the start yesterday evening. NV jetting water 60'+ and SV jetting water 25'. The run off is milky white and wind direction must have pushed most of the runoff toward the boardwalk and Cistern as the boardwalk between NV runoff channel and Cistern is covered in mud, silt and debris. The boardwalk is soaked from the dip beyond Emerald to the middle platform. Cistern Spring is down 2' below overflow. It is calm and clear. 0700 SB is cycling from jetting water in both vents to steam and back to jetting water. Still is impressive 8 hours later!

13 June 2020 @1816 by cb. Geysertimes note #14633 | 19.5H post eruptive. SB is gently billowing steam. All channels are dry. The water level in Cistern Spring is ~3' down from the rim of the inner tube. It has a wet water, "bath tub ring", 3 - 4" wide above the water level. It is cloudy blue in color and is very lightly steaming on the North west edge of the pool. There is an occasional bubble that breaks the surface and pops.

14 June 2020 @0900 by cb. Geysertimes note #14635 | 1D 10H post eruptive. SB platform is dry as are both run off channels. The storm is coming in and i wanted to see the platform before the rain came in. Both vents are

gently steaming with an occasional huff of steam. Cistern Spring water level is ~2.5' below overflow. Water is a opalescent blue, it is steaming with a weak 1 point. | Comment by Dave from B: Beverlys: Thanks for all your reports from Steamboat. They are much appreciated.

14 June 2020 @1900 by cb. Geysertimes note #14641 | 1D 20.5H post eruptive. SB platform is dry as a bone! ET, Jabba, the Dip are all dry. Both vents are just steaming; no huffing sounds at all. Cistern Spring is in overflow, the pool is high (water level is just covering the scalloped edges.) It is a milky, opalescent blue and has a very weak boil. At the trough, debris from the last eruption has been pushed into the channel directly in front of the foot bridge and the standing water is clear.

15 June 2020 @0915 by cb. Geysertimes note #14644 | 2D 10.5H post eruptive. Water has just barely come back to the platform. 8' angled jet from NV as viewed from the upper platform. (not visable from the middle platform) SV 5' angled jet. Both runoff channels are dry. Just the splash zones next to the vents are damp. Cistern Spring is overflowing with a nice boil (better than last night) and the pool is high.

15 June 2020 @1832 by cb (observers: cb, craig, geryalynn). Geysertimes note #14646 | 2D 20H post eruptive. more water in the system, SV run off channel is wet to the bridge but not a steady trickle of water yet. SV minors are pushing some debris from the last eruption about 10 yards down the channel where it is accumulating. Some concerted minors but they are followed by ~5m of no activity. Activity tonight seemed to be more SV dominated WHEN it was active. Cistern Spring is the same as this morning; high and in overflow.

16 June 2020 @1145-1245 by cb. Geysertimes note #14649 | 3D 13H post eruptive. I spent a hour at SB in between rain storms. Minors are mostly angled. A few are concerted. All lack height, energy and water. One "meh" concerted minor @ 1217 had a weak babbling brook but, it failed to move any of the debris that had gathered in low depressions, further down the channel. The trough has no accumulation of debris from the previous eruption yet. Typically strong SV minors will move small rocks and sinter bits from the previous eruption down the channel and they lodge at the base of the runoff channel in the trough. Stronger minors will move these bit closer to the channel directly in front of the foot bridge at Steerage. (where the big rock used to be) At this point I dont see any evidence of significant SV minors based on all the debris still on the channel and nothing in the trough has changed since Sunday evening. Cistern Spring is the same as yesterday.

16 June 2020 @1850-1930 by cb. Geysertimes note #14651 | 3D 20H post eruptive. Water levels in both vents have improved. Both vents are putting out more water by volume. SV Babbling brook at 1902 + fair SV fountain at 1904 with nice BB. NV angled jetting ~25'

and SV ~10'+. Good mix of concerted minors. No vertical. Loud percussive grumbling and pops. 1914 CNVSVH NV almost had some vertical action. Cistern Spring has an increase in its boil. It has VIGOROUS boil with big blooping/roiling boils.

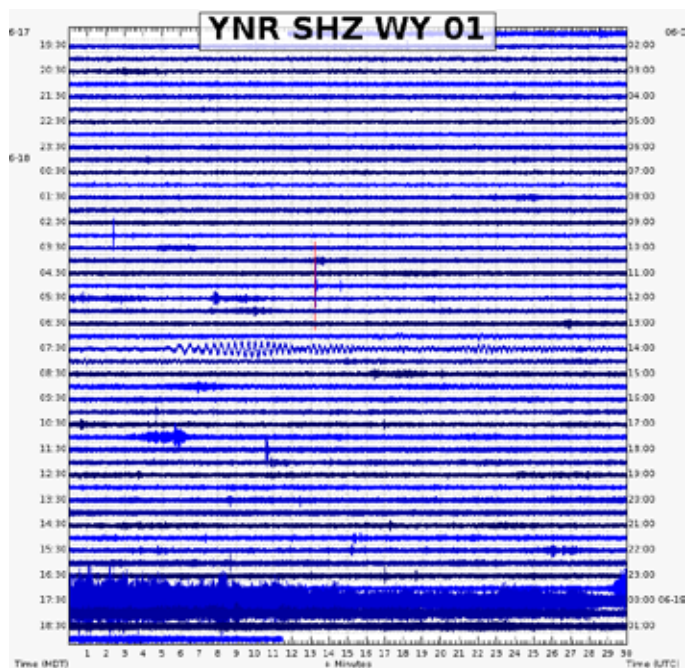
16 June 2020 @2130 by hurleyintjl (observer: John). Geysertimes note #14653 | No eruption as of 2130

17 June 2020 @0845-2100 by cb. Geysertimes note #14658 | Increased activity from yesterday. Lots of concerted minors where SV takes over with large fountaining and heavy runoff but not much tall NV vertical seen in the minor play. A few "bounces" where hopeful viewers seem to think/hope NV will move over but, nope! Cistern is still high with a good boil.

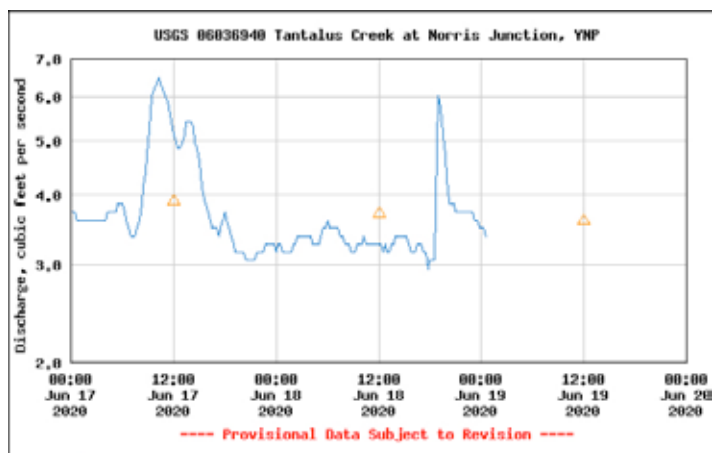
17 June 2020 @2230 by hurleyintjl (observer: John). Geysertimes note #14659 | No eruption as of 22:30

18 June 2020 @1728 by cb (observers: John Lucas!, Tom C. Darrell and Ann, William, Rachel, Ben VL, John, Elizabeth's parents and myself!). Geysertimes eruption #1198904 | ERUPTION | Confirmed by hurleyintjl and jkgood) | Duration of water phase: 3 minutes | GREAT minors that lead up to the eruption! VERY SHORT water phase. Wind direction at the start was to the SE so water came over the east end of middle deck. LOUD Steam phase was minutes after the start! Comparatively not much water down the SV channel or back side. No water down the NV runoff channel. @ 1H 45M SB is still in steam phase. no color changes in either vent. Height was measured at 330' - 360' per Ben VL. | Secondary entry #1 @1729 E by K.Cooper. Geysertimes eruption #1198888 | YNR Seismograph | Confirmed by ypcaribou and hurleyintjl | Comment by ypcaribou: Text from DN Floor Crew at 1902: "At Cygnet Lakes TH Steamboat 101 is affirmative." | Comment by hurleyintjl: My first eruption!

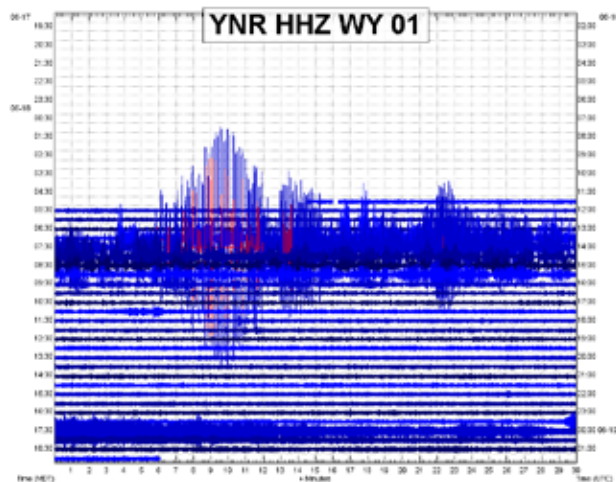
Secondary entry #2 @1728 by BenVL (observers: Ben VL, Carol, Tom C, William, Rachel, John Lucas!, Jon Good, and many others). Geysertimes eruption #1198914 | Duration of water phase: 3 minutes | After being stranded overnight in Grant due to car troubles, I arrived at 1455. Activity seen from Decker seemed to be pretty decent most of my sit with good height, volume, and frequency. Semi frequent vertical out of NV, usually with no significant follow up. The wind shifted to SSE about ~20 minutes prior and I lost visibility of the minor eruptions. I left for the platforms not long after hearing what sounded like a decent sized minor. The runoff was at least a 3.5 when I got to steerage. A couple minutes later it was holding steady and there was more on the way. The runoff began increasing rapidly from a 4 to a 5. I called out the runoff because it was looking really good. Suddenly there was another increase in runoff. We were well beyond a 5++ and at at this point I realized that something To be continued... Height measurement at least 338' will get a more refined measurement later. Full report to come hopefully soon.



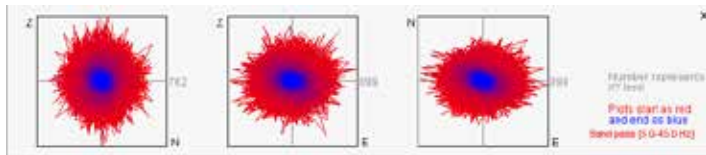
Norris Junction seismogram showing Steamboat Geyser's 5:28 PM major eruption on 18 June 2020. [Caption and screen capture by JSJ]



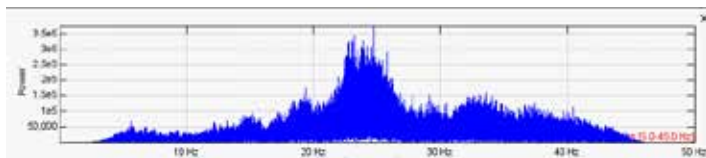
Tantalus Creek discharge graph showing Steamboat Geyser's 5:28 PM major eruption on 18 June 2020. [Caption and screen capture by JSJ]



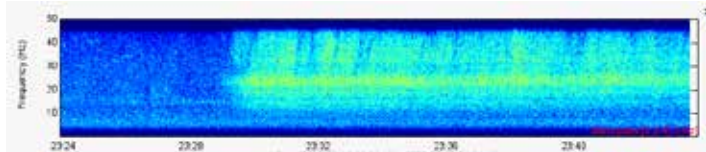
YNR capture by JarnoO.



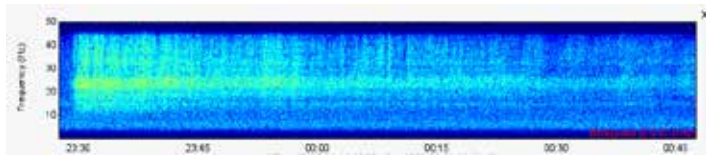
Particle Motion



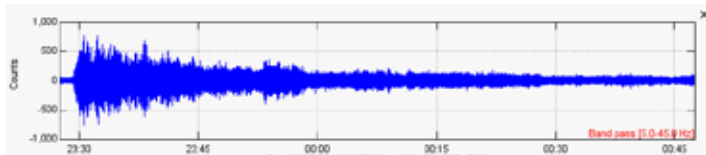
Spectra



Spectrogram earliest - 1728 start



Spectrogram



Wave

[Items from a] Link to a folder containing various visualizations of this eruption from YNR's HHZ band, with particle motion also including its HHE and HHN bands. All times are in UTC.

19 June 2020 @1034 by cb. Geysertimes note #14676 | 17H PE. platform quiet. SV channel mostly dry at middle deck but has a trickle of water in the runoff channel at the footbridge. NV channel has a trickle of water running down the channel from some small bubblers within the channel. vents gently steaming. Cistern Spring is ~ 2' below the rim of the inner tube and has a 3" wet bathtub ring above the water level. It has a few random ping pong ball/tennis ball sized bubbles that are breaking the surface of the pool in the center and on the side closest to the bw.

19 June 2020 @1728 by cb. Geysertimes note #14681 | 1D PE. SB platform is quiet. Vents are gently steaming and channels are mostly dry. Still a trickle of water in the NV and SV run off channels at steerage. Cistern Spring has completely drained. No water or steam visible.

20 June 2020 @0757 by bbev. Geysertimes note #14687 | 1D, 14.5 hrs post eruption: quiet and steamy. CS is just 1-2" below overflow. Clear pool, very steamy and diffi-

cult to see any boil, no waves or sound. Trough is mostly clear of debris up to bridge. Very light trickle at bottom of SV, with no water seen in SV runoff from mid deck.

20 June 2020 @2100 by Ben VL. Geysertimes note #14700 | No change since this AM

21 June 2020 @0743-0800 by bbev. Geysertimes note #14701 | 2D,14hrs PE: SV runoff damp, no running water as I arrived. NV runoff no longer trickling water as it had been yesterday morning. Deep grumbling and steamy from SB. 0751 first water seen from either vents, NV 10-15', SV 5'. 0756 spritzzy NV, splash from SV. CS high and overflowing, light boil in opalescent pool.

21 June 2020 @0850-0921 by JeffL. Geysertimes note #14704 | ~2D16H Water is back in the system. Deep grumbling. Mostly SV play with a couple decentish splashes out of both vents. Water barely trickling down sv runoff. Cistern in overflow, too steamy to see boil.

21 June 2020 @1630-1940 by Ben VL (Observers: Ben VL, Carol). Geysertimes note #14708 | Nice improvement from this morning. Bounce at 1638, 42, & 43. Woo's noted at 1731, 1844, 1910, & 1940. Play is mostly SV dominant with frequent sustained angled minors putting out runoff pushes. Nothing greater than a babbling brook. NV less active and usually wispy, but it had some decent angled volume accompanying almost all vertical it put out. Long pauses between most events. SV channel is already starting to turn white.

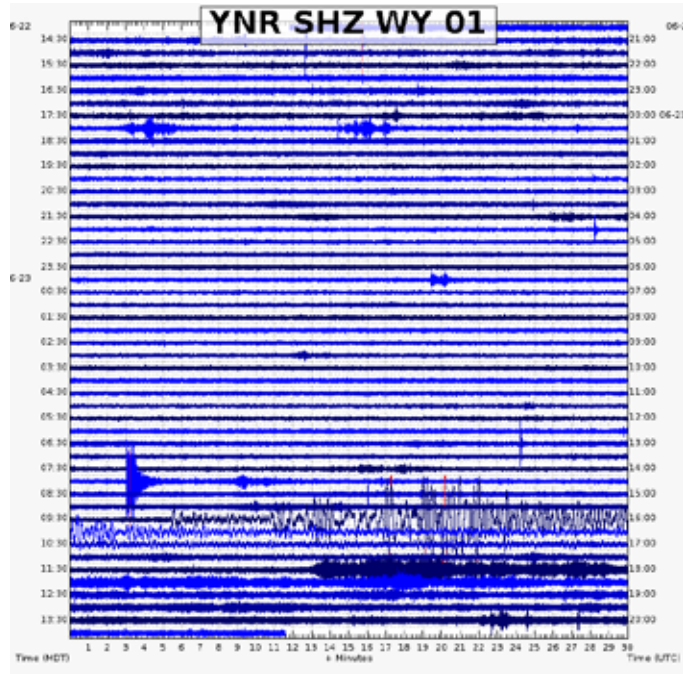
22 June 2020 @0616-2200 by Ben VL (Observers: Ben VL, Bill, Carol, Craig & Geralynn, Ranger Mark, more.). Geysertimes note #14755 | NV more active than yesterday upon arrival, but not as much progression as I would have thought. Spent most of the day at decker. Fairly decent activity with a lot of nice minors throughout the day. I noted WooHoo or better minors at 1105, 19, 1315, & 1816 (I probably missed some as well). However, there was a decent minor multiple times per hour. Often without much follow up. At 2110 we had a very sustained push event.

23 June 2020 @1142 by cb (observers: Geralynn & Craig, Byron, Daryle & Ann, Jim & Judy (Elizabeth's parents) Danielle & Stephanie, Joe & Faith, Cindy & Jessie H and many others!). Geysertimes note #1199811 | **ERUPTION** | Duration of water phase: 14 minutes | Confirmed by CraigC and bbev | Good strong concerted minors from both vents both yesterday and this morning. (no wifi in the government area yesterday) SV produced voluminous amounts of water in the minors and NV had beautiful tall vertical, especially yesterday evening AND this morning! Beautiful blue sky day with 350'+ height. | Comment by Lee Dalton: This is some very strange behavior by SB. What is Cistern Spring doing? |

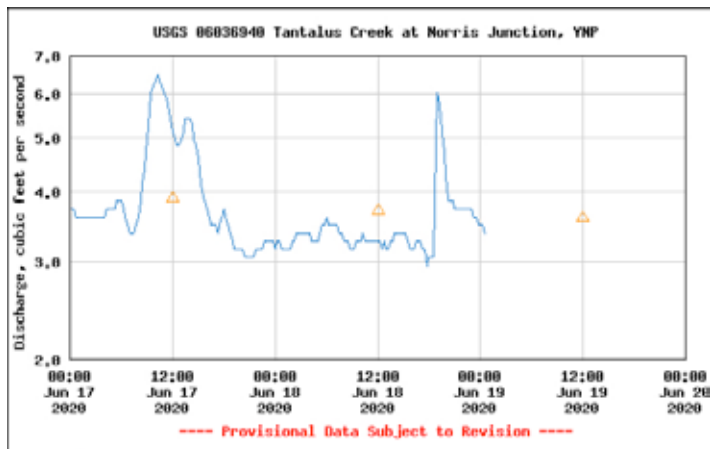
Secondary entry #1 @1142E by K.Cooper. Geysertimes eruption #1199782 | YNR Seismograph | Spec-

rogram pattern matches Steamboat.

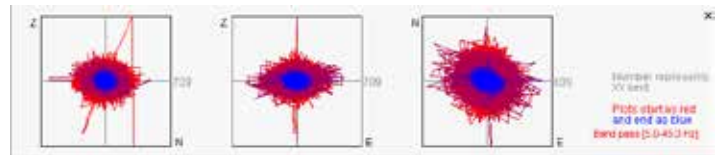
Secondary entry #2 @1142 by Ben VL (Observers: Ben VL, Bill & Carol, Geralynn & Craig C, Byron, Daryle & Ann, Phil Winkler, Jim & Judy, Danielle & Stephanie, Joe & Faith, Cindy & Jessie H, and many more!). **Geysertimes eruption #1199822** | Duration of water phase: 14 minutes | UNBELIEVABLE Decker start!!!! Initial start height measurement at 386' NOT taking into account north vent slightly angling away from me at decker island. Actual height should be taller. Will amend that measurement to the official height once I have a chance to do the math to accommodate NV's angle. Details later



Norris Junction seismogram showing Steamboat Geyser's 11:42 AM major eruption on 23 June 2020. [Caption and screen capture by JSJ]



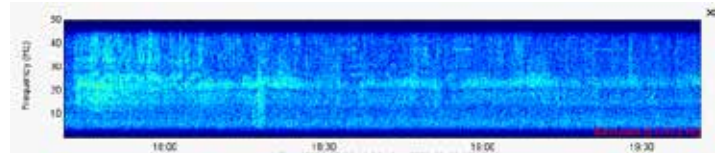
Tantalus Creek discharge graph showing Steamboat Geyser's 11:42 AM major eruption on 23 June 2020. [Caption and screen capture by JSJ]



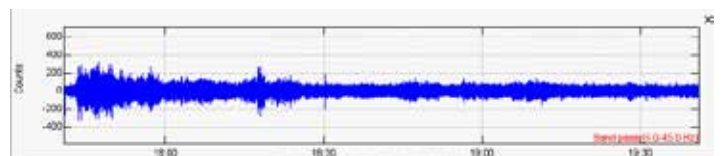
Particle Motion



Spectra



Spectrogram



Wave

23 June 2020 @2020 by Ben VL (Observers: Ben VL and Carol). **Geysertimes note #14717** | 8H 38M in. In secondary water phase. NV rather thick angled and vertical jetting 20'-35', SV 15'-25'. Beautiful in the evening light. Cistern is about 2' below overflow.

24 June 2020 @1830 by cb (observers: cb and bbev). **Geysertimes note #14725** | Sorry, Gone fishin! | Comment by Dave from B: It's about time! | Comment by CraigC: How did the overflow look on Lewis Lake? I hope you had a great time, you guys deserve it!

25 June 2020 @0825 by cb. **Geysertimes note #14726** | 1D 20.5 H PE. SB is gently huffing/lightly grumbling mostly steam with an 1 observed wispy 5' - 8' angled jet from NV. SV just steam. Runoff channels are dry. No pooling of water in either channel as observed from middle deck. Cistern Spring is in overflow. It is too steamy to see what the boil looks like.

25 June 2020 @1036 by underarockphoto (observer YNR). **Geysertimes note #14728** | That is NOT Steamboat, please read this before entering anything...

25 June 2020 @1842-1920 by cb. **Geysertimes note #14729** | 2D7H PE. Steamboat is still gently steaming and grumbling. 1 NV 10' angled splash at 1849 and another at 1902. No water from SV, just steaming. Channels dry except some rain puddling in low depressions in the channels. Cistern Spring is in overflow with a vigorous boil. It is still very steamy and hard to see into the pool.

26 June 2020 @0918-0954 by bbev. Geysertimes note #14734 | 2D, 21.5hrs PE; Steamy, soft, deep grumble, SV channel and shoulder dry. 0923 first spritz from both vents. 0927 very light spritz from NV. CS high and overflowing. Steam coming from normal NV channel area at steerage. Overall, very quiet during brief observation.

26 June 2020 @1000-1500 by Micah Kipple (Observers: Micah and Rachel). Geysertimes note #14736 | A noticeable, but not jaw-dropping improvement from Bill's observations. Mostly wispy angled activity from North and South with some weak concerted minors, perhaps one or two splashes of vertical from North. Near the end of our observation period there was a heavier concerted minor that moved gravel down the channel towards the bridge and sent water all the way to the bridge finally.

26 June 2020 @1710 by cb. Geysertimes note #14737 | 3D 6H PE. mostly weak minors, some concerted. Wispy NV ~15', SV ~5' - 8', some sustained enough to move some debris a few feet more down the channel. SV runoff channel wet with lots of debris from the last eruption still scattered all over the channel. CS is overflowing on all sides with a vigorous boil.

27 June 2020 @0726-0751 by bbev. Geysertimes note #14743 | 3D, 20 hrs PE; Both vents active. SV with light to mod runoff. Water trickling down back shoulder and far south runoff. Did not see any vert. in short observation.

27 June 2020 @1930-2230 by William. Geysertimes note #14748 | Notable concerted vertical minors at 20:25 and 22:01. That said, no follow up or sustain in action. Runoff observed at steerage today was not particularly voluminous or consistent.

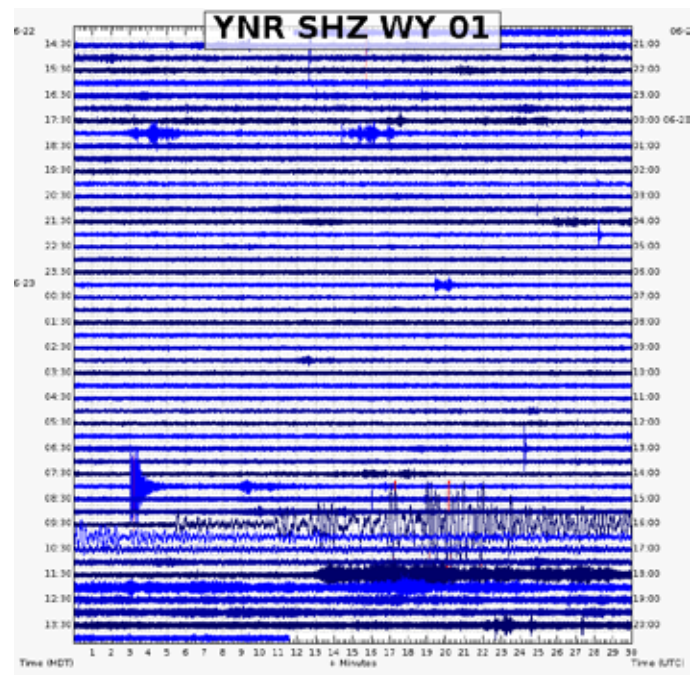
28 June 2020 @0815-1000 by Ben VL. Geysertimes note #14756 | Report of a radio call for minors at around 0600. Frequent NV vertical during my sit, and a lot better volume and rumbly noises than yesterday. At 0908 we had a huge minor with sustained, thick, and tall NV vertical with SC fountaining and a 4.75 on the flea scale. Could have started if it wanted. No significant follow up.

28 June 2020 @1930 by Graham. Geysertimes note #14761 | Strong minor at 0908 that could have made it start. Good volume all day. Another push at ~1900 but no SB as of 1930.

28 June 2020 @2145 by William. Geysertimes note #14763 | No Steamboat when I left at 21:45. Some high volume minors at 20:43 but could not get organized.

29 June 2020 @0129 by cb. Geysertimes eruption #1200752 | Woke Bill up at government area at around 0136 and was in waning end of a long, heavy rain storm. Revised to reflect accurate start time based on seismo. **Secondary Entry #1 @0129 E by JSJ (observer: Norris Junction seismometer). Geysertimes eruption**

#1200753 |



Norris Junction seismogram showing Steamboat Geyser's 1:29 AM major eruption on 29 June 2020. [Caption and screen capture by JSJ]

29 June 2020 @0700 by Graham. Geysertimes note #14773 | 5.5h post eruptive. In steam phase audible from parking lot but not very loud. Both vents in wet steam phase. both main channels running water. Upper deck getting rained on. Middle deck mostly dry except when the wind shifts. Cistern Spring a few inches below overflow.

29 June 2020 @1014-1043 by cb. Geysertimes note #14771 | 8H 45M PE. Steamboat is still throwing water from both vents. NV thick angled and vertical jets 30'+. SV Fountaining to 25'+. Cistern Spring has dropped ~2.5' below overflow. pool is calm and clear.

29 June 2020 @1230 by Graham. Geysertimes note #14778 | Continuous heavy steam with loud huffing. Cistern Spring down a foot.

29 June 2020 @1701 by bbev. Geysertimes note #14785 | 15.5 hrs PE; quiet, dry. CS drained to 1' below rim of inner tube, ~4' below overflow, no steam, occasional bubble in opalescent pool.

29 June 2020 @1900 by User34. Geysertimes note #14795 | 17.5H P.E. Billowing steam with some more forceful huffs from N.V. Cistern about 1 1/2 feet below inner rim. Calm and beautiful opaque blue.

30 June 2020 @1930 by cb. Geysertimes note #14816 | 1D 18.5H PE. SB is gently huffing steam. No water. ET, Jabba and both channels are very dry. Cistern Spring is in overflow, scalloped edges are just barely covered and it has a weak boil. Pool is an opalescent blue color.