

**Advanced Multicomponent
Seismic Software**

**Analysis of seismic data recorded in March 2026
by network C8 (stations SV1S-SV5S)
at Aquistore test site**

Report AQ-2026-03-IM

May 7, 2026

Igor Morozov

igor.morozov@usask.ca

Contents

1. Station performance.....	3
Data recovery.....	7
2. Data quality.....	7
3. Processing procedure and parameters.....	11
4. Seismic event detection.....	11
Automatic detections.....	11
Event bulletins.....	12
Teleseismic events (class 1).....	13
Regional events (class 2).....	24
Local events (classes 3 and 4).....	24
Possible mine blasts at the Estevan mine (class 3a).....	24
Events related to mining operations (class 3b).....	34
Events in array proximity (classes 4a and 4b).....	35
5. SEGY files.....	37
6. Conclusions and recommendations.....	37
7. Appendix – Cellular routers recommended for replacement.....	38
Sierra RV55.....	38
Perle IRG5410.....	39

1. Station performance

Station performance for March 2026 is summarized in Figure 1, and state-of-health parameters are shown in Figure 2.

Power-supply voltages looked generally good and station operation was practically uninterrupted. However, the voltage at station SV3S frequently dropped below the optimal level (Figure 2). This station may require attention. This situation should improve after replacing the cellular modems as suggested in earlier reports.

Despite the consistent (actually, the best in the array) power-supply status, station SV5S returned no usable data due to a failed sensor (or sensor cable).

On March 10, we switched off the modem at station SV5S and extracted its SIM card to test various options for switching to another type of modem. This is why this station is not shown in Figures 1 and 2 after March 10. Unfortunately, as Nick Ginther's tests and our research of the available cellular networks suggest, low-power modems like Sierra (now called Semtech) do not work with SaskTel networks. However, these modems are certified for Bell, Rogers, and Telus networks.

Sierra modem RV55 looks like a good option, with much lower power consumption than the current SaskTel modems. Sierra RV55 has a Canadian equivalent called Perle IRG5410, with about 10% lower specifications (see Appendix to this report). As a lower-cost compromise, it is also likely that Sierra modems currently available on site would work with a non-SaskTel network, and they might have satisfactory power specs.

Another issue continuing from February is that the vertical-component channels at stations SV3S and SV4S are often contaminated with series of spikes. This issue may be related to power variations or seasonal temperature and humidity variations.

Network C8: Data retrieval summary from 2026-03-01 to 2026-04-01

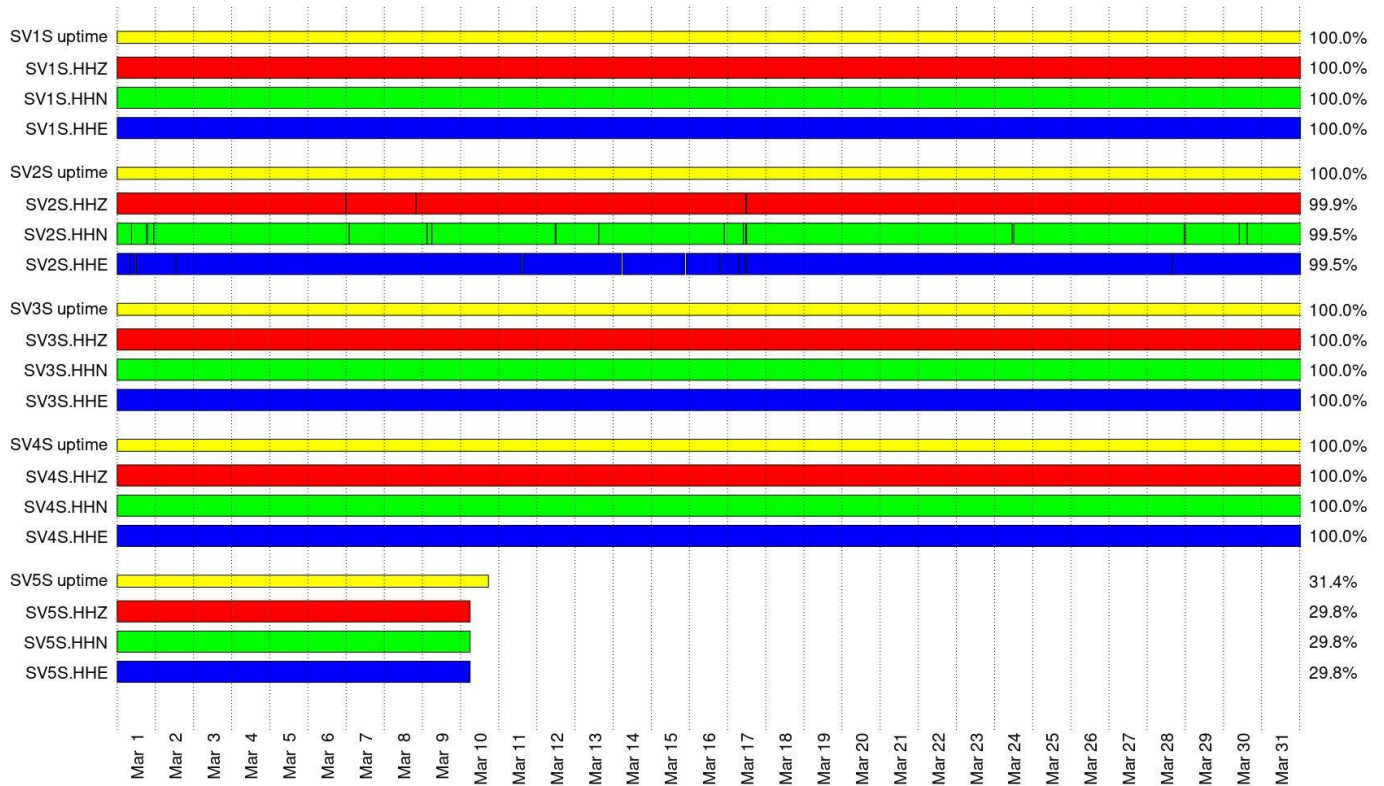


Figure 1. Retrieved data intervals for all channels (red, green, and blue bars) and uptimes (yellow). Total percentages of measured uptime and data retrieval are shown on the right. Gaps in yellow bars are insignificant and only show lapses in probing procedures.

State of health for station C8.SV1S (NE01) from 2026-03-01 to 2026-04-01

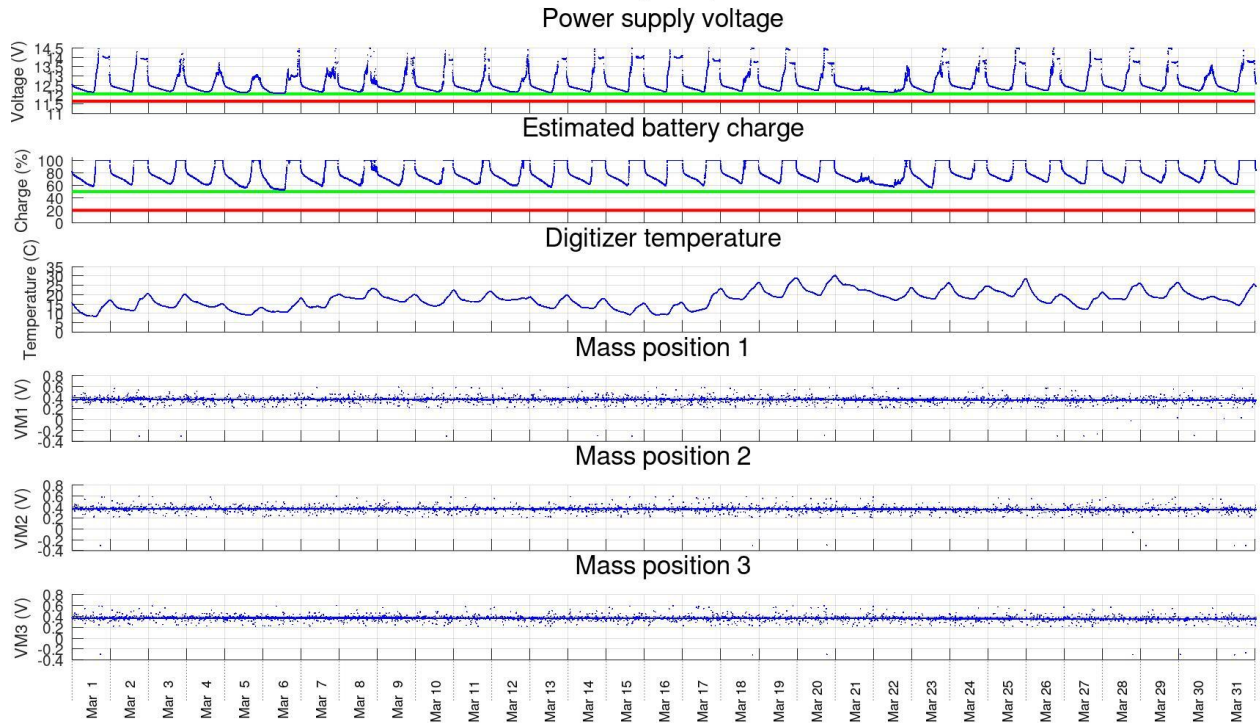


Figure 2. State of health parameters for each station (SV1S here). Image headings: power supply voltage, estimated battery charge levels, temperature on board, voltages measuring mass positions.

State of health for station C8.SV2S (SW01) from 2026-03-01 to 2026-04-01

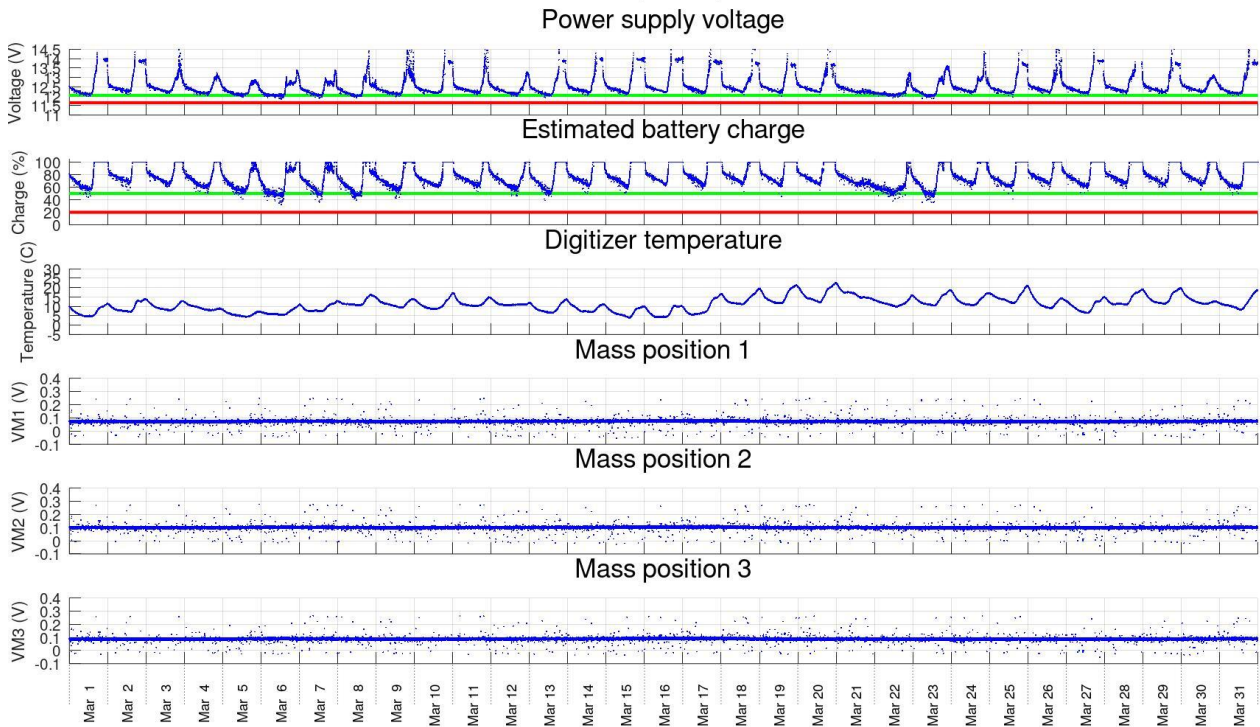


Figure 2, continued, station SV2S.

State of health for station C8.SV3S (NW01) from 2026-03-01 to 2026-04-01

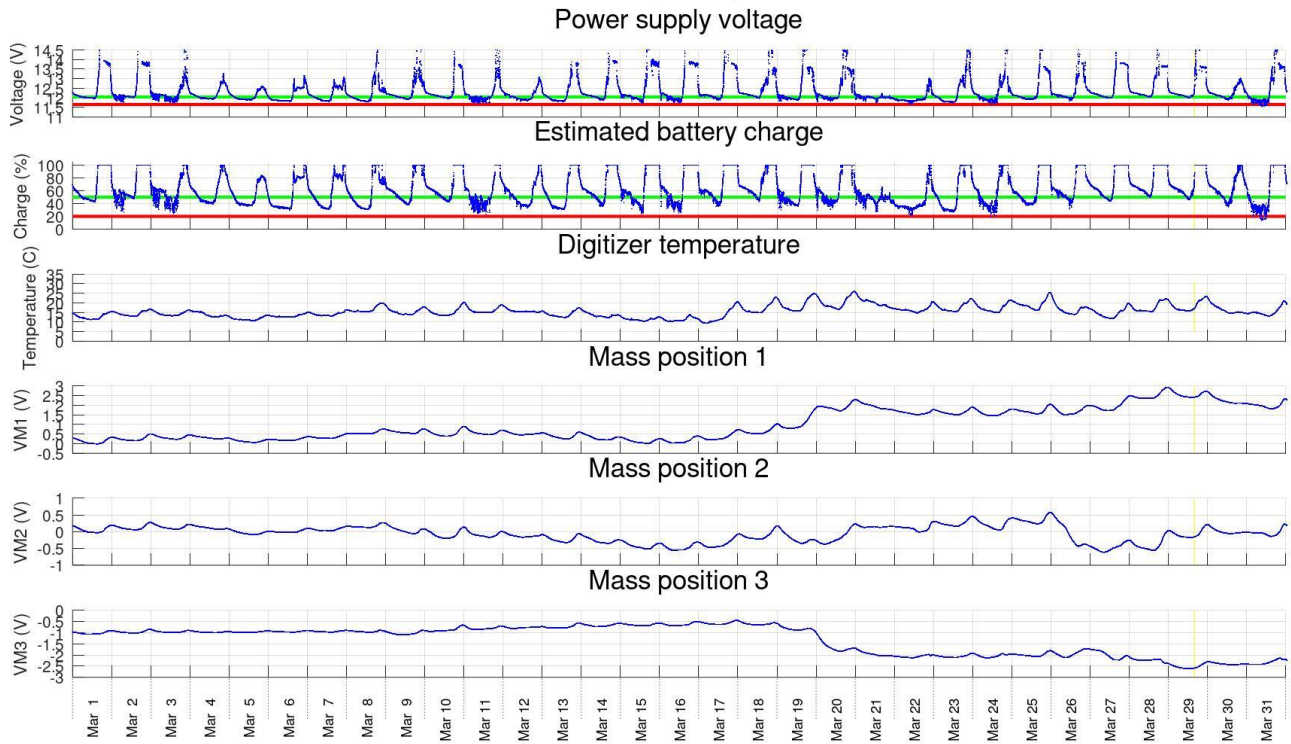


Figure 2, continued, station SV3S.

State of health for station C8.SV4S (SE01) from 2026-03-01 to 2026-04-01

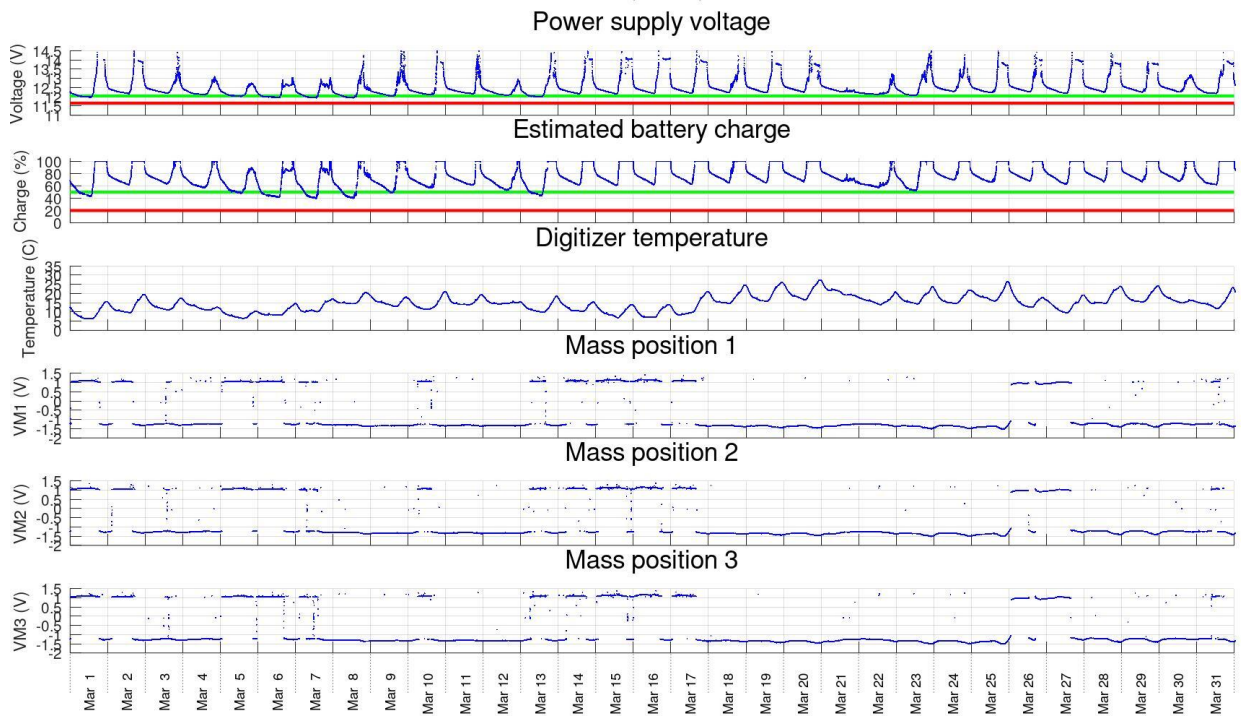


Figure 2, continued, station SV4S.

State of health for station C8.SV5S (NE02) from 2026-03-01 to 2026-04-01

Power supply voltage

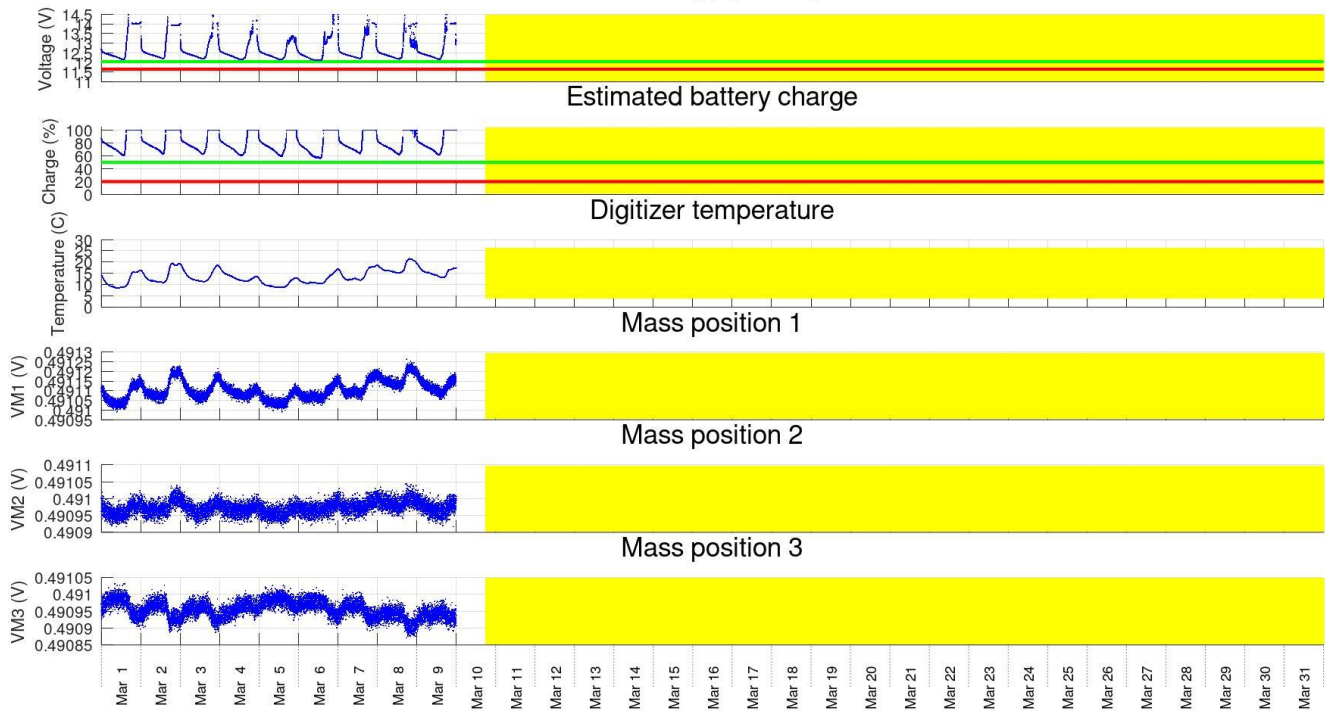


Figure 2, continued, station SV5S. “Mass position” voltages in this station are very low because of the failed sensor (or sensor cable). This station was taken offline after March 10 (yellow).

Data recovery

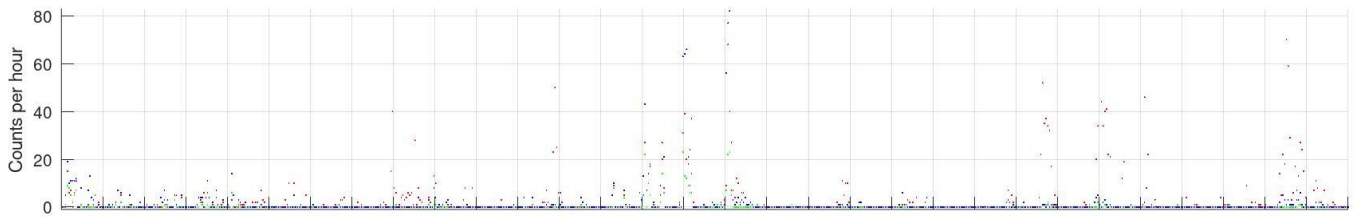
Data recovery was at nearly 100% from all Aquistore stations (Figures 1 and 2).

2. Data quality

Figure 3 shows two measures of data quality evaluated for each channel:

- 1) Numbers of spikes and tears (sharp changes of DC level) within 1-hour time intervals;
- 2) 1-hour root-mean square (RMS) average amplitudes in each channel.

Station C8.SV1S (NE01): Data quality from 2026-03-01 to 2026-04-01
Spikes and tears in records



RMS amplitudes after despiking

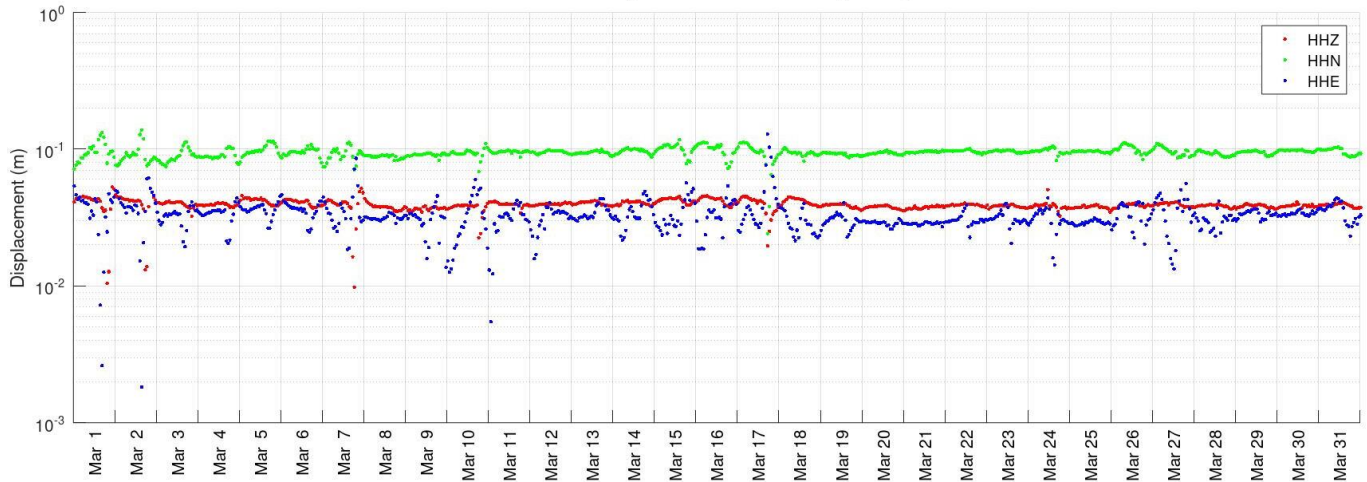


Figure 3. Measures of data quality in hour-long intervals. Station names and time intervals are indicated in plot headings (SV1S in this plot). Red, green, and blue colours correspond to channels HHZ, HHN, and HHE, respectively (as in Figure 1).

Top panels: Numbers of spikes and tears per hour auto-detected in data records.

Bottom panels: RMS ground displacements (meters).

Station C8.SV2S (SW01): Data quality from 2026-03-01 to 2026-04-01
Spikes and tears in records

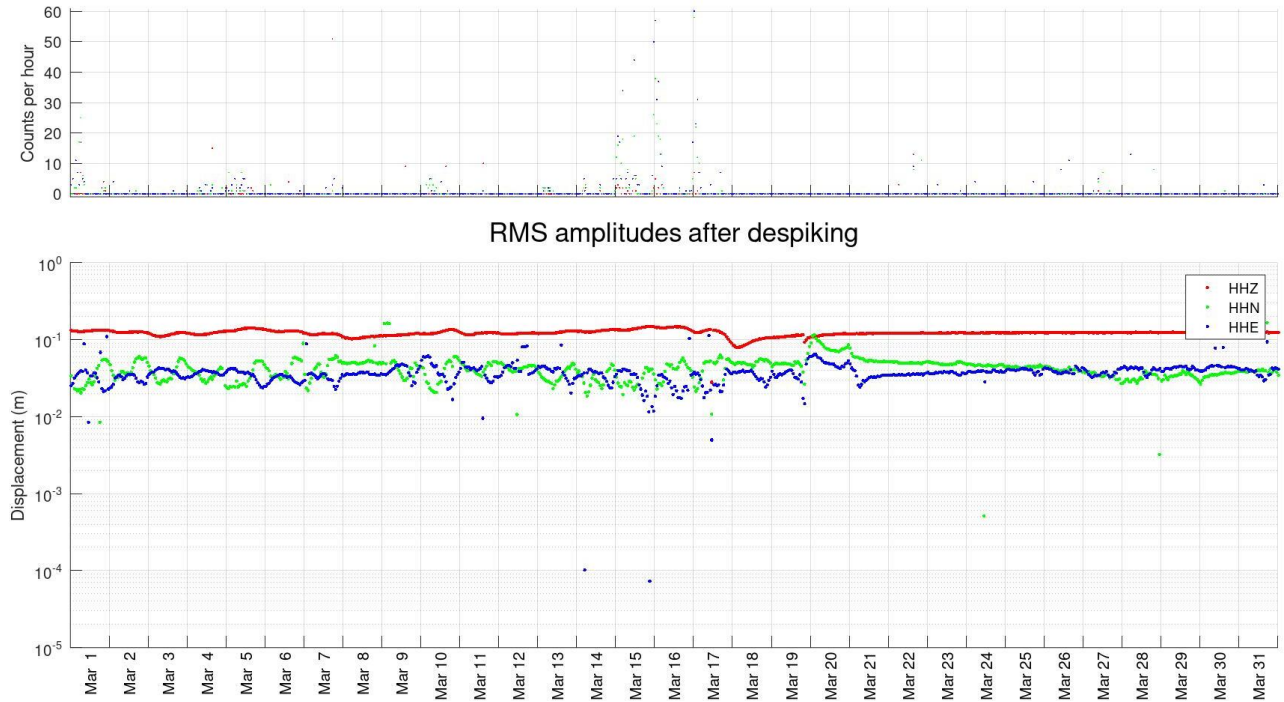


Figure 3, continued. Station SV2S.

Station C8.SV3S (NW01): Data quality from 2026-03-01 to 2026-04-01
Spikes and tears in records

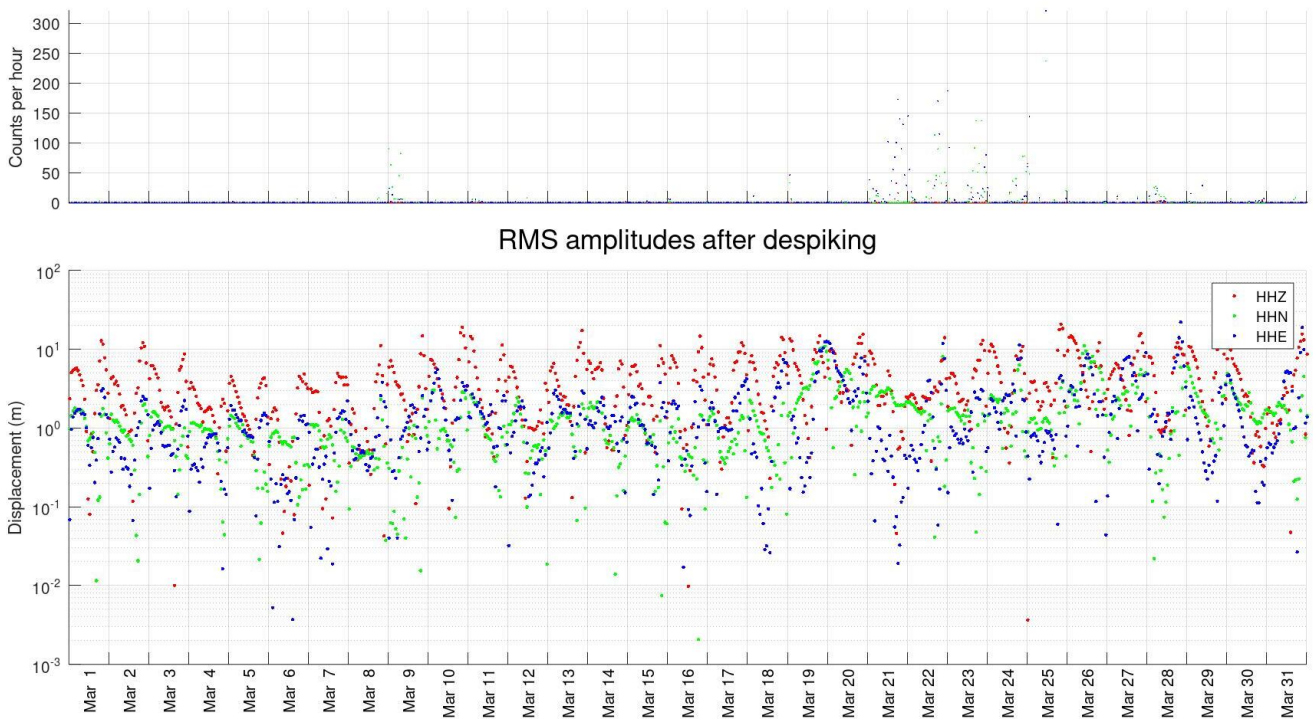


Figure 3, continued. Station SV3S.

Station C8.SV4S (SE01): Data quality from 2026-03-01 to 2026-04-01
Spikes and tears in records

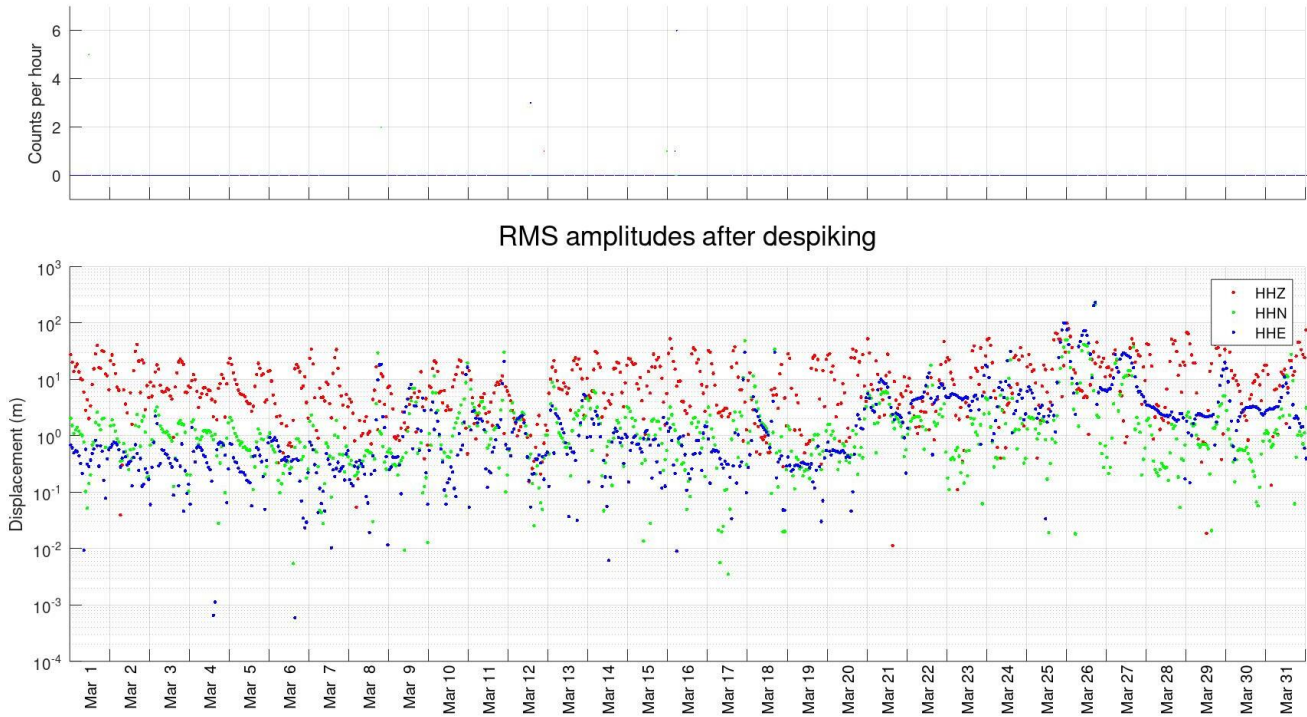


Figure 3, continued. Station SV4S.

Station C8.SV5S (NE02): Data quality from 2026-03-01 to 2026-04-01
Spikes and tears in records

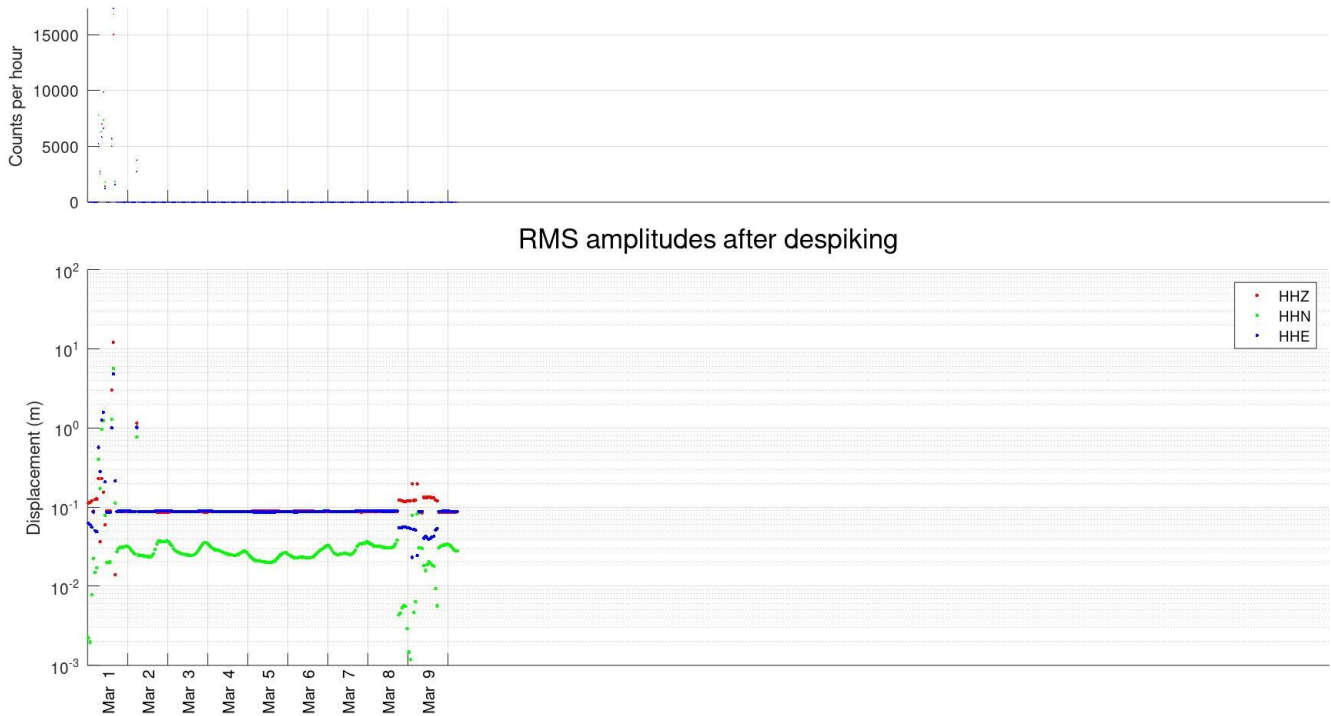


Figure 3, continued. Station SV5S. The sensor has failed, and the station was taken offline on March 9.

3. Processing procedure and parameters

Processing procedure and parameters were the same as in previous reports.

4. Seismic event detection

The classification of seismic events used in these reports and numbers of events detected in March 2026 are shown in Table 2.

Table 2. Classification of seismic events and numbers of detections at the Aquistore broadband seismic array

Event class code	Class name	Identification criteria	Number of detections in this report
1	Teleseismic	Hypocentral distance $D > 1000$ km, presence in catalogues	21
2	Regional	$100 < D < 1000$ km, presence in catalogues	0
3	Local	Approx. $4 < D < 100$ km	-----
3a	Possible mine blasts	Characteristic waveforms, amplitudes, back-azimuths east of Aquistore, D about 12-15 km	19
3b	Mining-related	Low frequencies, extended repeated wavetrains low arrival velocities related to surface waves	2 (selected from numerous occurrences)
4	Proximity (close local)	$D < 3-4$ km, deviation of array moveouts from plane-wave patterns, high frequency	-----
4a	Surface sources near array	Large travel-time moveouts, variable back-azimuths	2
4b	Target zone	Source at recognizable nonzero depth, small travel-time moveouts, high frequency	0

Automatic detections

The procedure of multichannel automatic detections is currently being revised and not shown in the present report.

Event bulletins

Earthquake data bulletins for the period of this report were obtained from NEIC (USGS) and NRCAN web services (Figure). Events larger than magnitude 2.5 were taken from USGS, and all available events were retrieved from NRCAN. Events with magnitudes above the selected $magnitude \propto distance^{1.5}$ threshold (dashed green line in Figure) were reviewed interactively (next section).

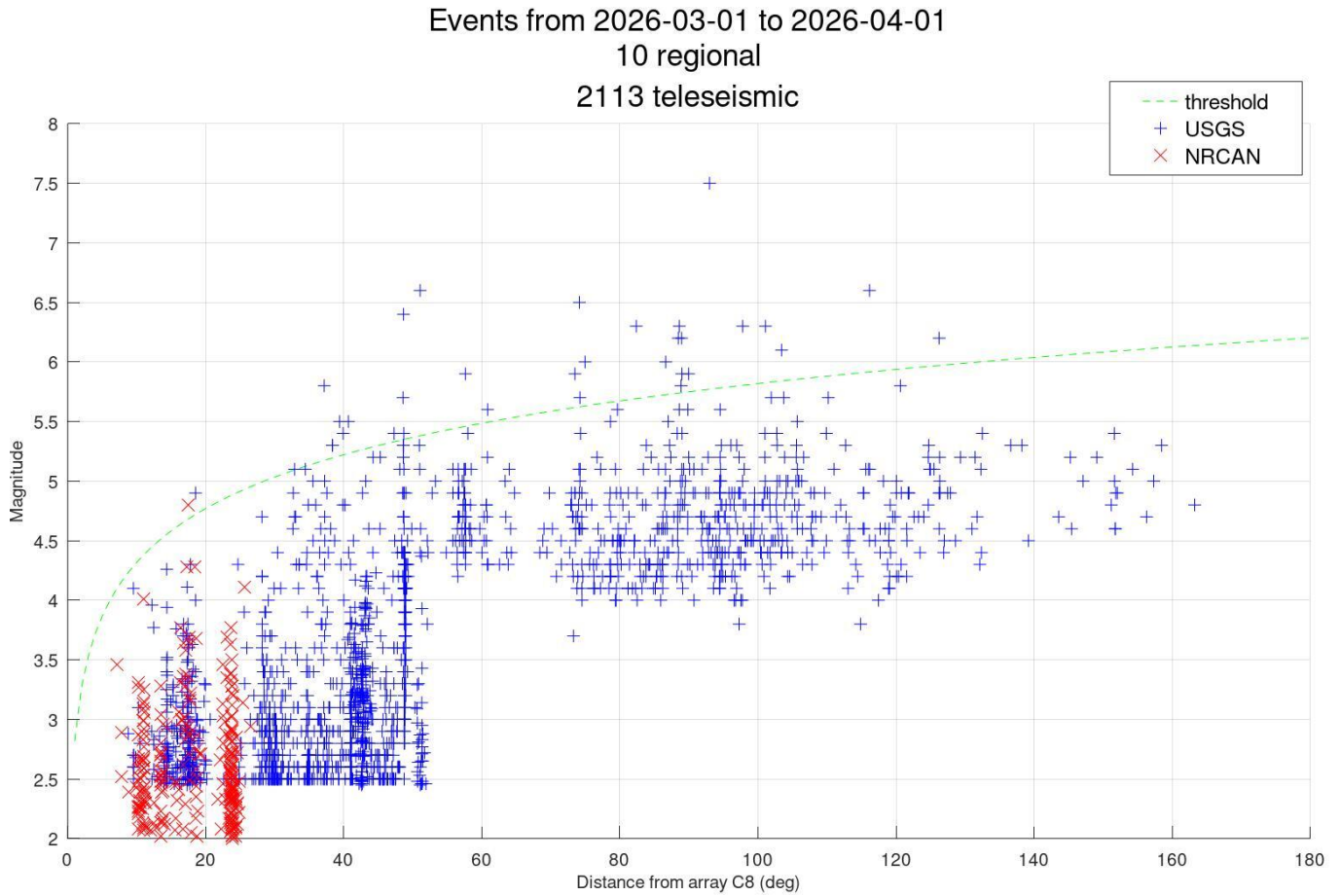


Figure 5. Magnitudes and distances from Aquistore for earthquake parameters downloaded from USGS and NRCAN databases (legend). Dashed green line shows the detection threshold above which a manual review of events was performed.

Teleseismic events (class 1)

Above the threshold line in Figure 5, 21 teleseismic events (class 1 in Table 2) were identified in March 2026 (Figure 6). Time zeros in Figure 6 plots are located at the times of P-wave arrivals at the Aquistore array predicted in the reference model IASP91 and corrected interactively. Blue bars near $time = 0$ are interactive picks of P-wave arrival times.

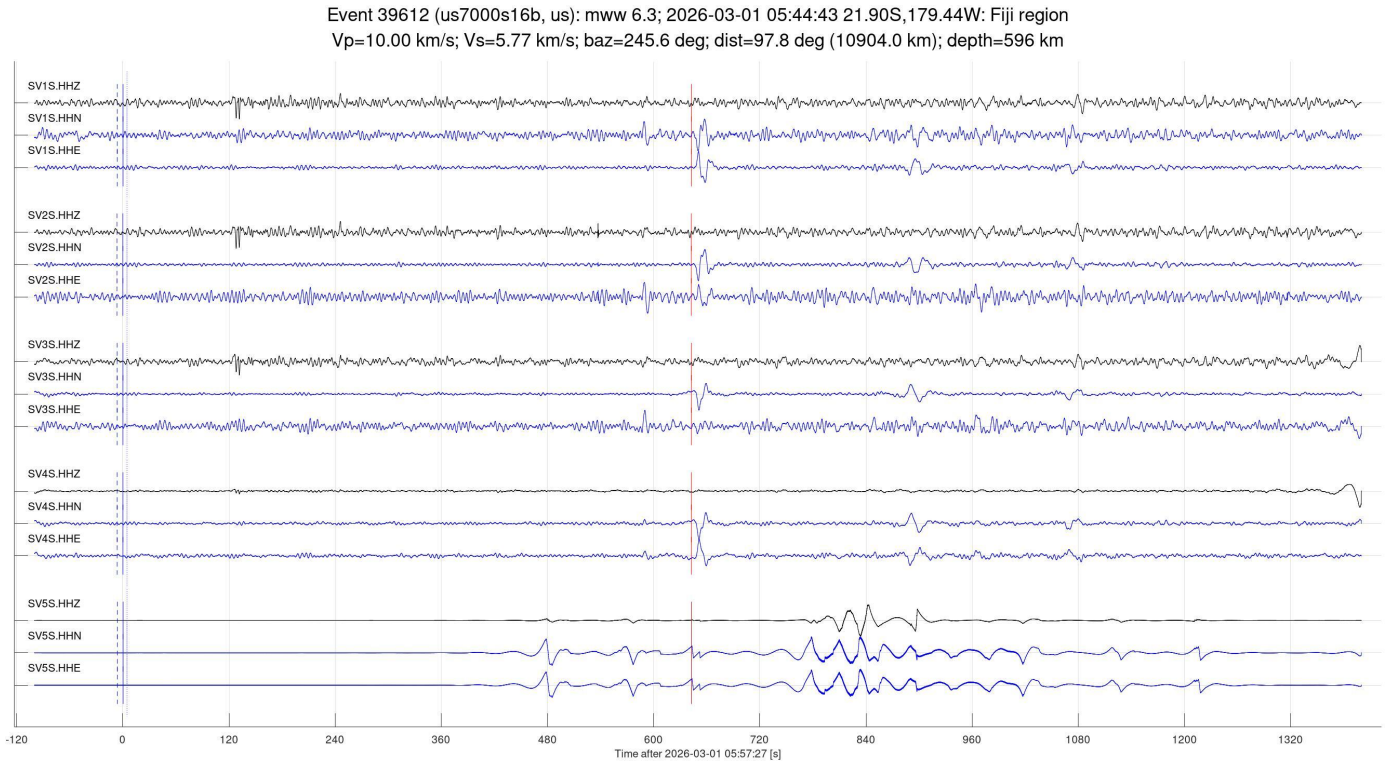


Figure 6. Teleseismic events detected at Aquistore in March 2026. Plot headings show catalogue IDs, times, distances in degrees, source coordinates and localities, back-azimuths ('baz='), distances ('dist=') and source depths. Vertical-component records are shown in black, and horizontal components in blue. Blue and red bars indicate the P-wave and S-wave picks, respectively. Ignore the (experimental) cyan and dashed bars.

Records obtained from the failed channels of station SV5S before March 9 were kept in the plots in order to illustrate their characters.

Event 40057 (us7000s2n6, us): mww 5.7; 2026-03-06 21:08:20 52.32N,176.44E: 228 km ESE of Attu Station, Alaska
Vp=10.00 km/s; Vs=5.77 km/s; baz=306.2 deg; dist=48.6 deg (5416.0 km); depth=9.34 km

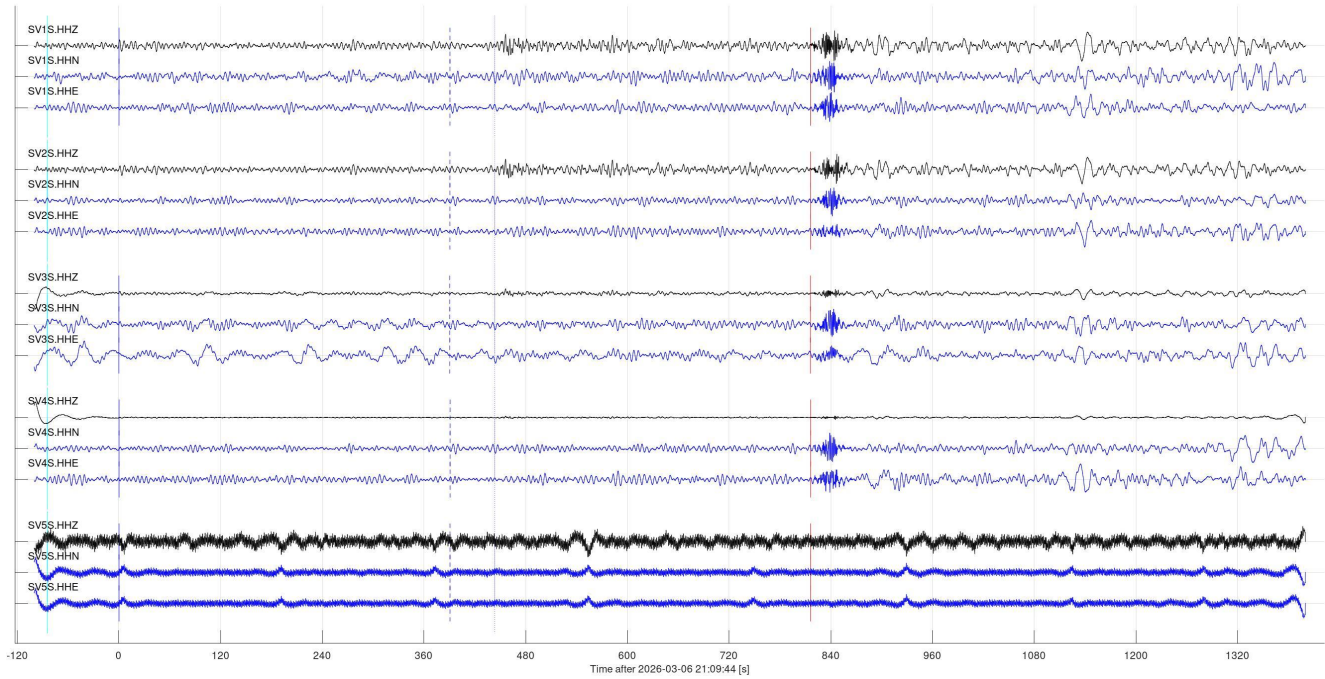


Figure 6, continued.

Event 40127 (us7000s2bn, us): mww 5.5; 2026-03-05 19:25:07 52.08N,168.96W: 96 km S of Nikolski, Alaska
Vp=10.00 km/s; Vs=5.77 km/s; baz=300.1 deg; dist=40.7 deg (4532.7 km); depth=17 km

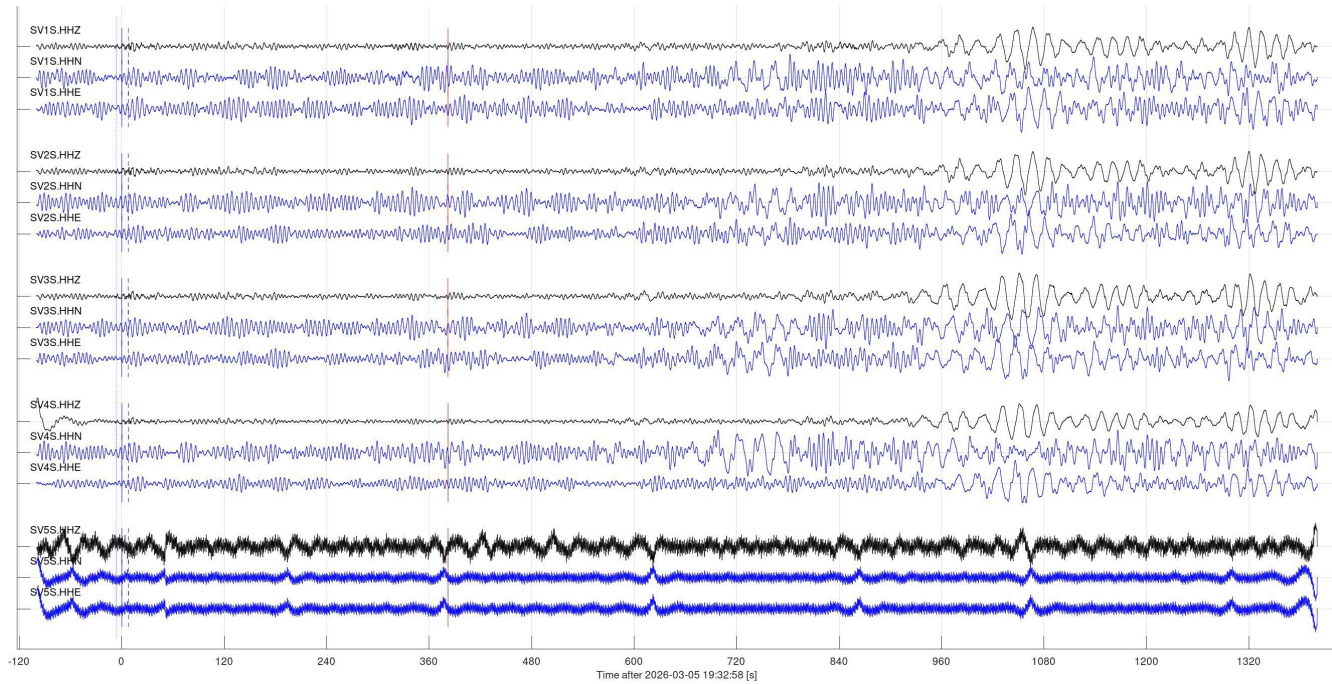


Figure 6, continued.

Event 40145 (us7000s27e, us): mwr 4.9; 2026-03-05 11:30:09 32.04N,93.41W: 2026 Red River Parish, Louisiana Earthquake
Vp=10.00 km/s; Vs=5.77 km/s; baz=153.3 deg; dist=18.5 deg (2065.5 km); depth=11 km

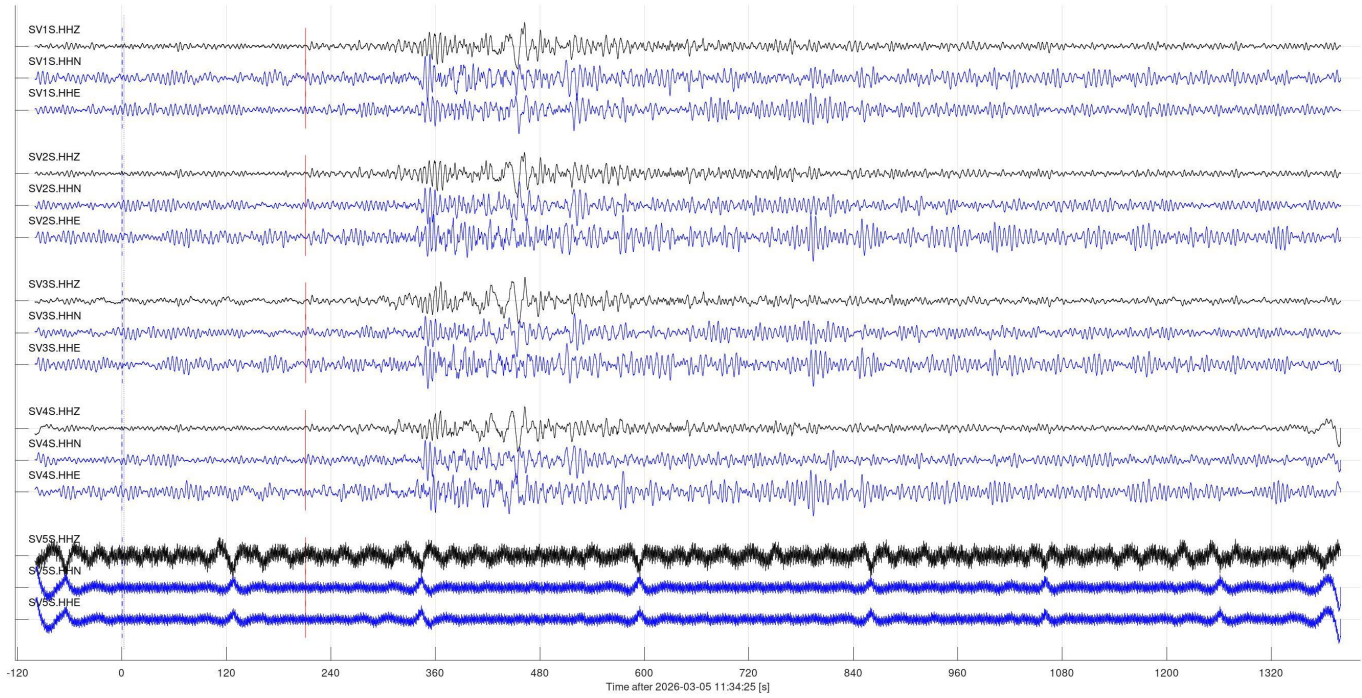


Figure 6, continued.

Event 40185 (us7000s211, us): mww 6.4; 2026-03-04 17:54:37 52.27N,176.36E: 224 km ESE of Attu Station, Alaska
Vp=10.00 km/s; Vs=5.77 km/s; baz=306.1 deg; dist=48.6 deg (5423.8 km); depth=10 km

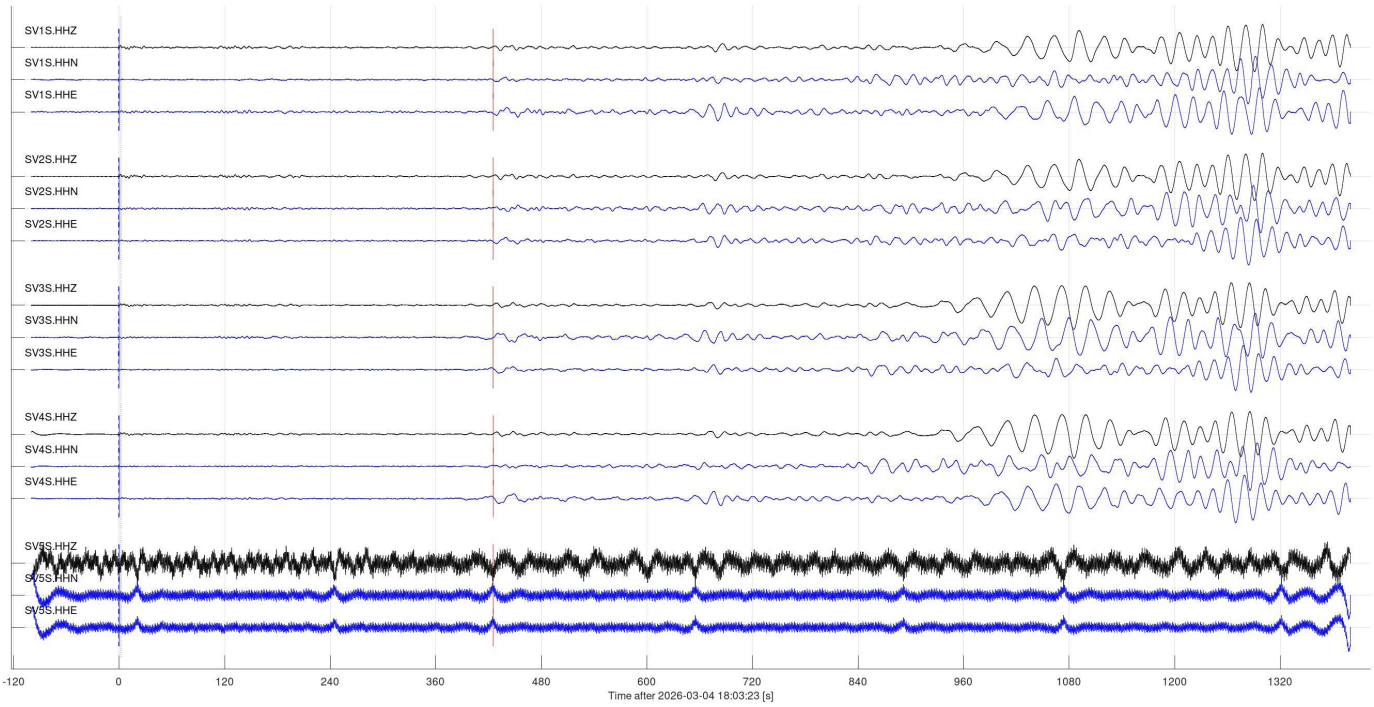


Figure 6, continued.

Event 40195 (us7000s1z1, us): mww 5.4; 2026-03-04 13:27:00 52.24N,176.31E: 222 km ESE of Attu Station, Alaska
Vp=10.00 km/s; Vs=5.77 km/s; baz=306.1 deg; dist=48.7 deg (5428.3 km); depth=10 km

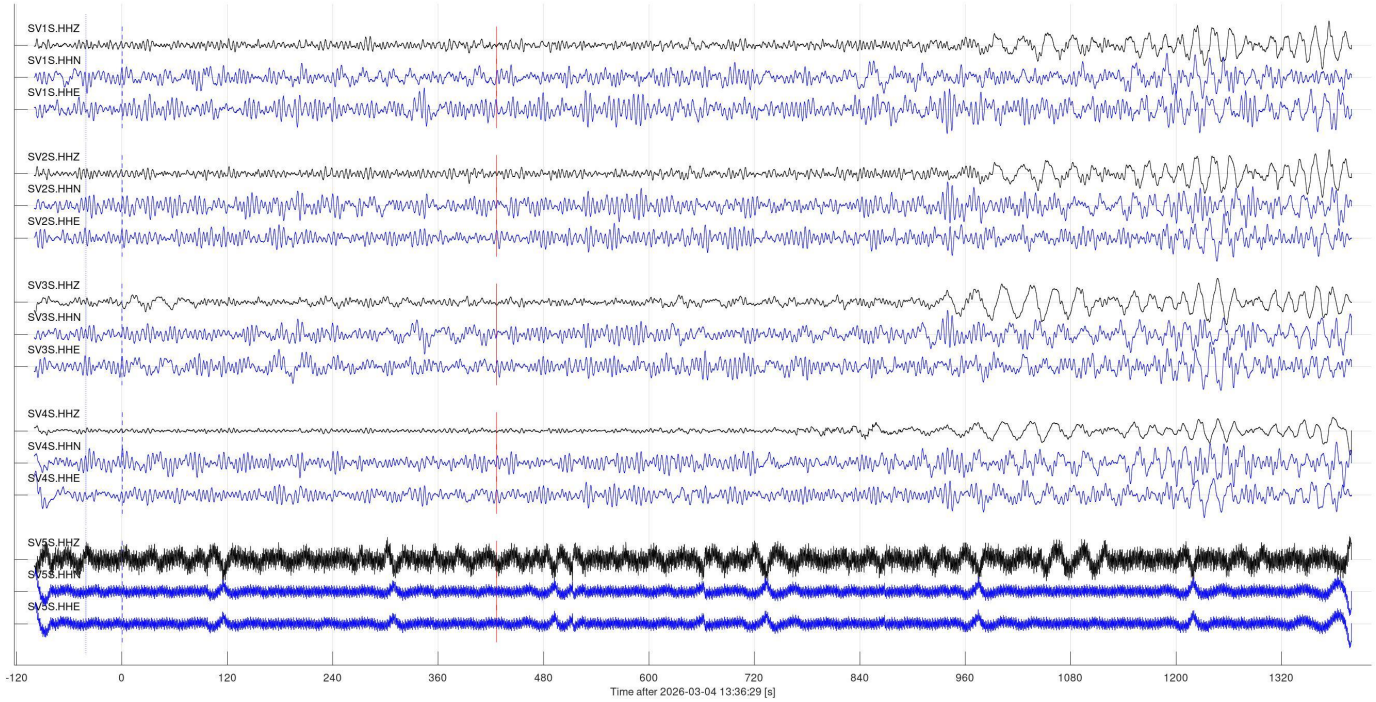


Figure 6, continued.

Event 40271 (us7000s1In, us): mww 6.2; 2026-03-03 04:56:46 2.04N,96.74E: 62 km SE of Sinabang, Indonesia
Vp=10.00 km/s; Vs=5.77 km/s; baz=335.2 deg; dist=126.3 deg (14077.2 km); depth=18 km

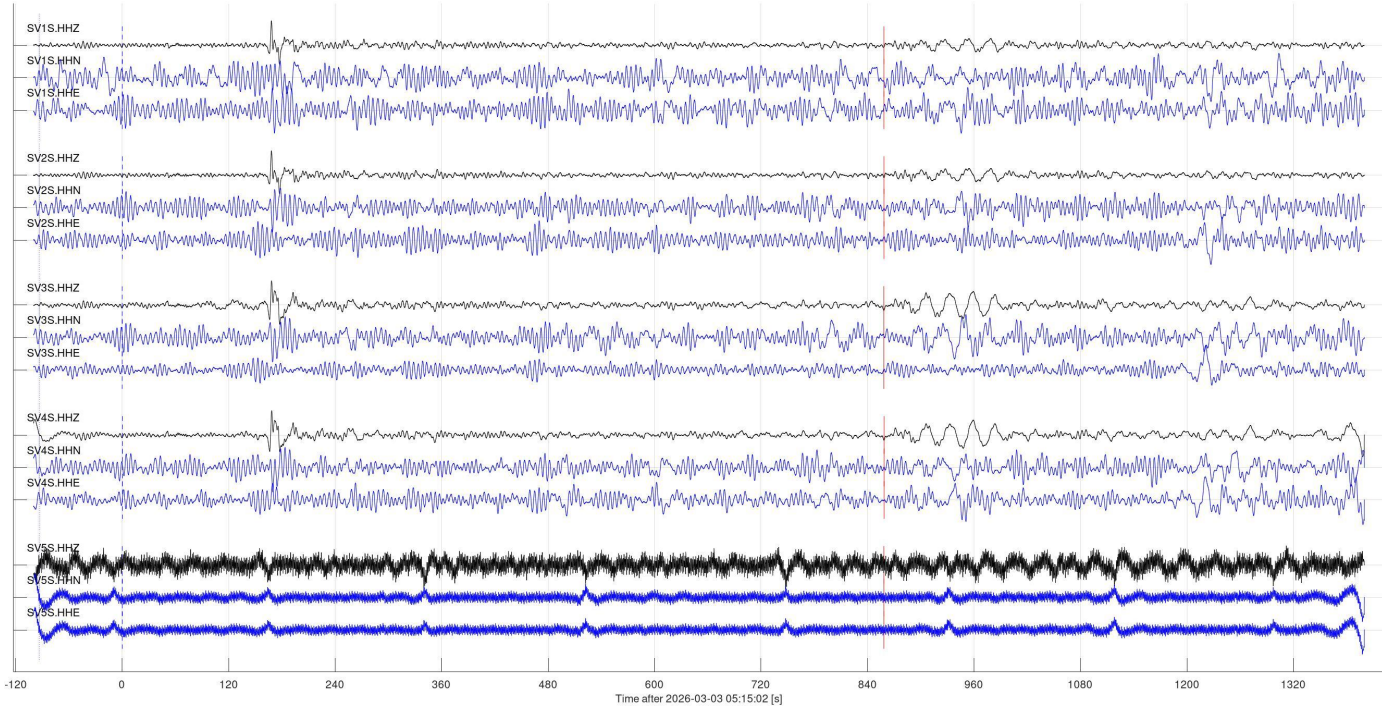


Figure 6, continued.

Event 40324 (us7000s1cq, us): mww 6.0; 2026-03-02 03:55:24 23.00N,144.16E: Volcano Islands, Japan region
Vp=10.00 km/s; Vs=5.77 km/s; baz=301.7 deg; dist=86.6 deg (9661.2 km); depth=20 km

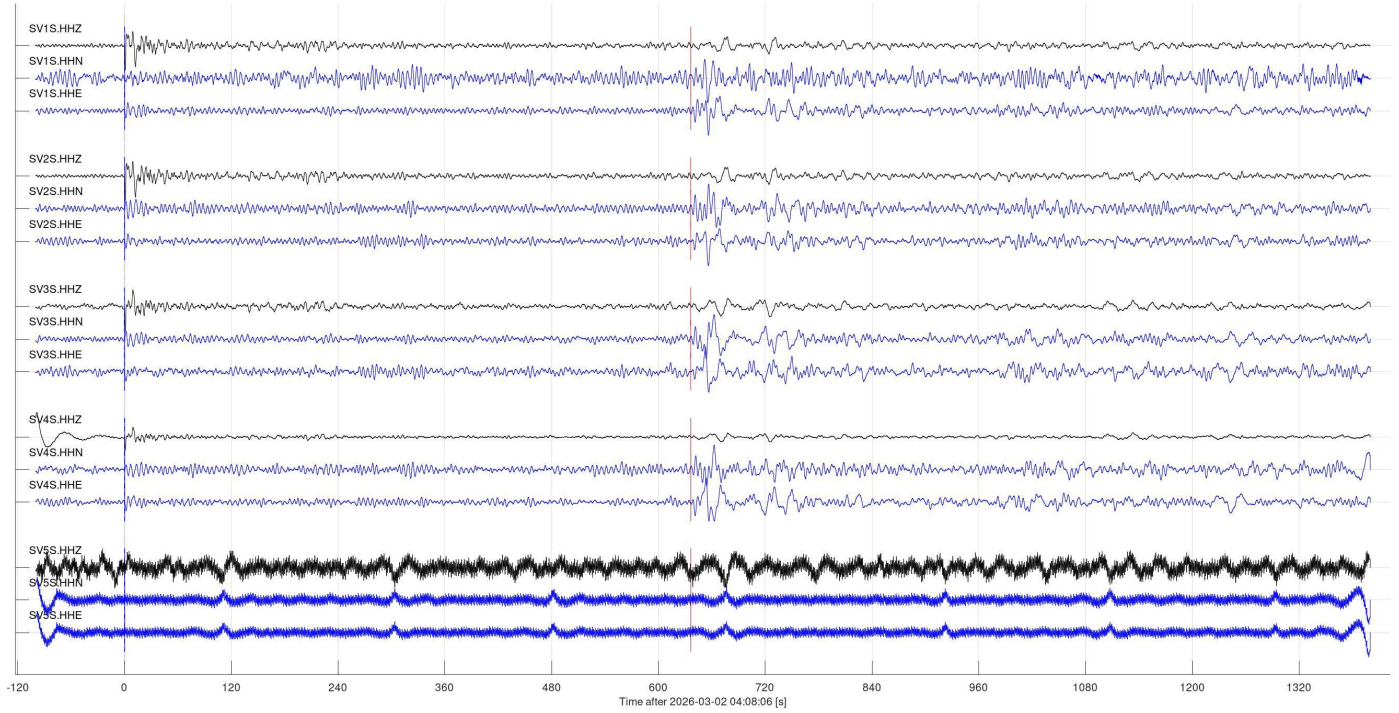


Figure 6, continued.

Event 40455 (us6000sg0y, us): mww 6.3; 2026-03-13 13:39:19 28.68S,71.63W: 85 km W of Vallenar, Chile
Vp=10.00 km/s; Vs=5.77 km/s; baz=152.5 deg; dist=82.4 deg (9183.6 km); depth=10 km

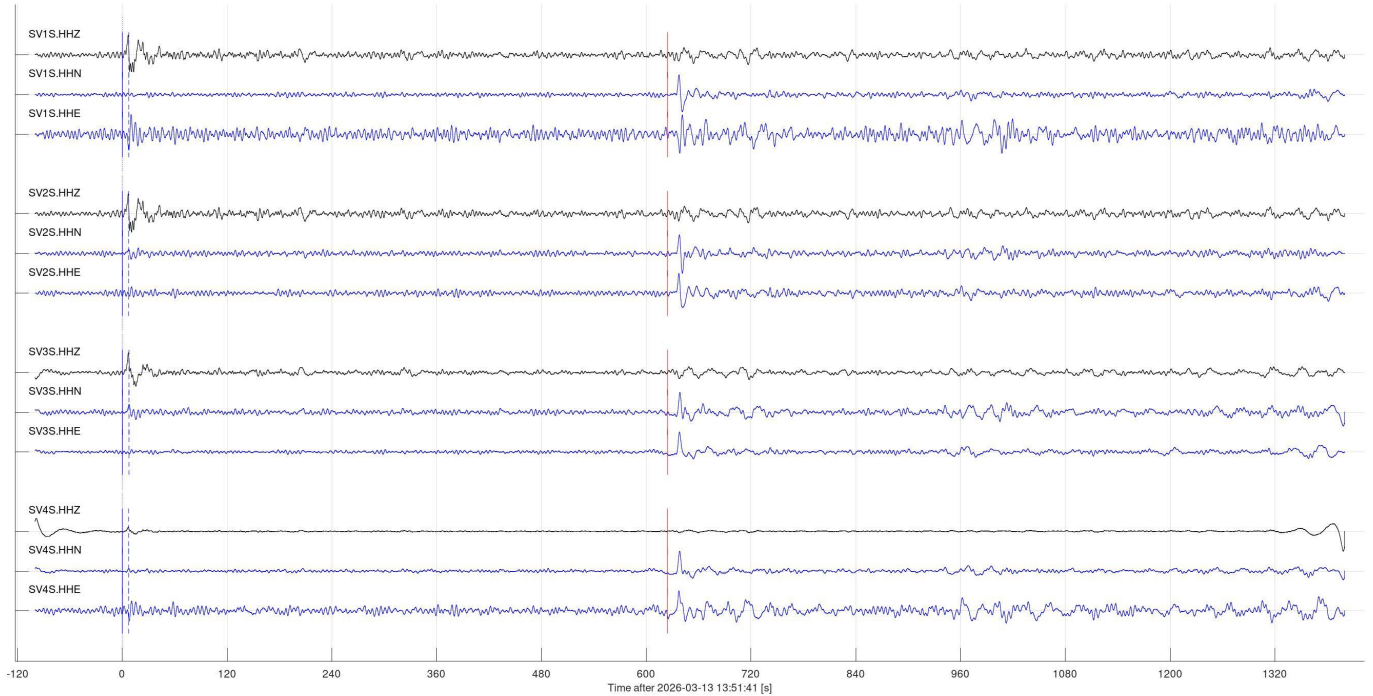


Figure 6, continued.

Event 40630 (us7000s39n, us): mww 6.0; 2026-03-09 23:03:54 40.56N,14.07E: 12 km W of Anacapri, Italy
Vp=10.00 km/s; Vs=5.77 km/s; baz=44.6 deg; dist=74.9 deg (8356.6 km); depth=382 km

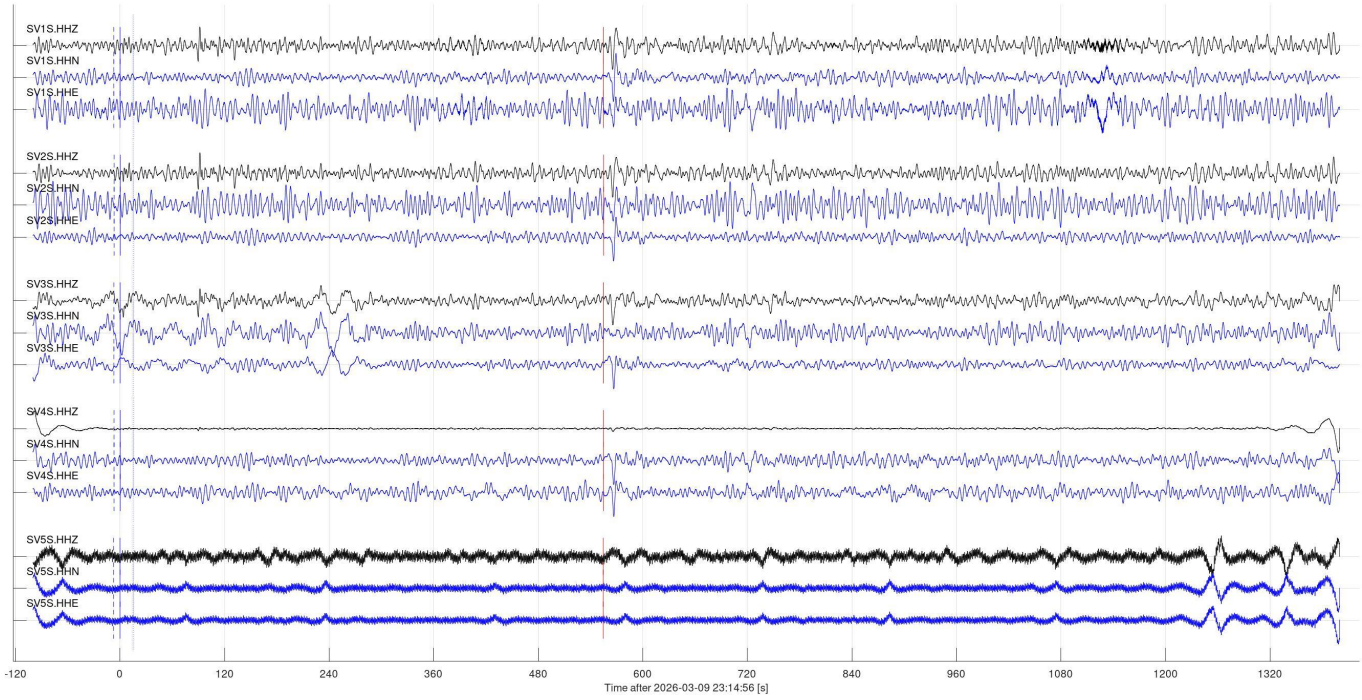


Figure 6, continued.

Event 40735 (us6000s1db, us): mww 6.2; 2026-03-22 06:15:37 15.38S,173.05W: 102 km NE of Hihifo, Tonga
Vp=10.00 km/s; Vs=5.77 km/s; baz=245.0 deg; dist=88.9 deg (9916.7 km); depth=10 km

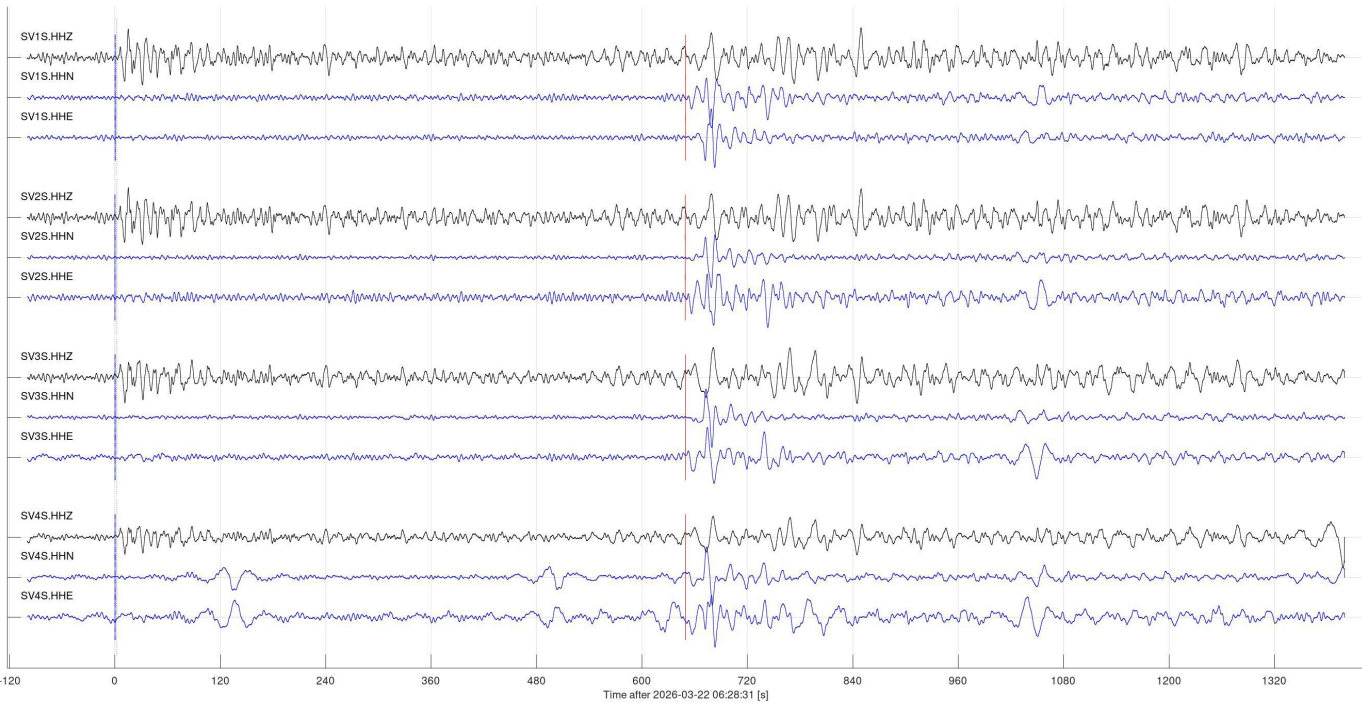


Figure 6, continued.

Event 40777 (us6000si5l, us): mww 6.6; 2026-03-21 12:16:47 23.85N,45.83W: northern Mid-Atlantic Ridge
Vp=10.00 km/s; Vs=5.77 km/s; baz=98.1 deg; dist=51.0 deg (5692.0 km); depth=10 km

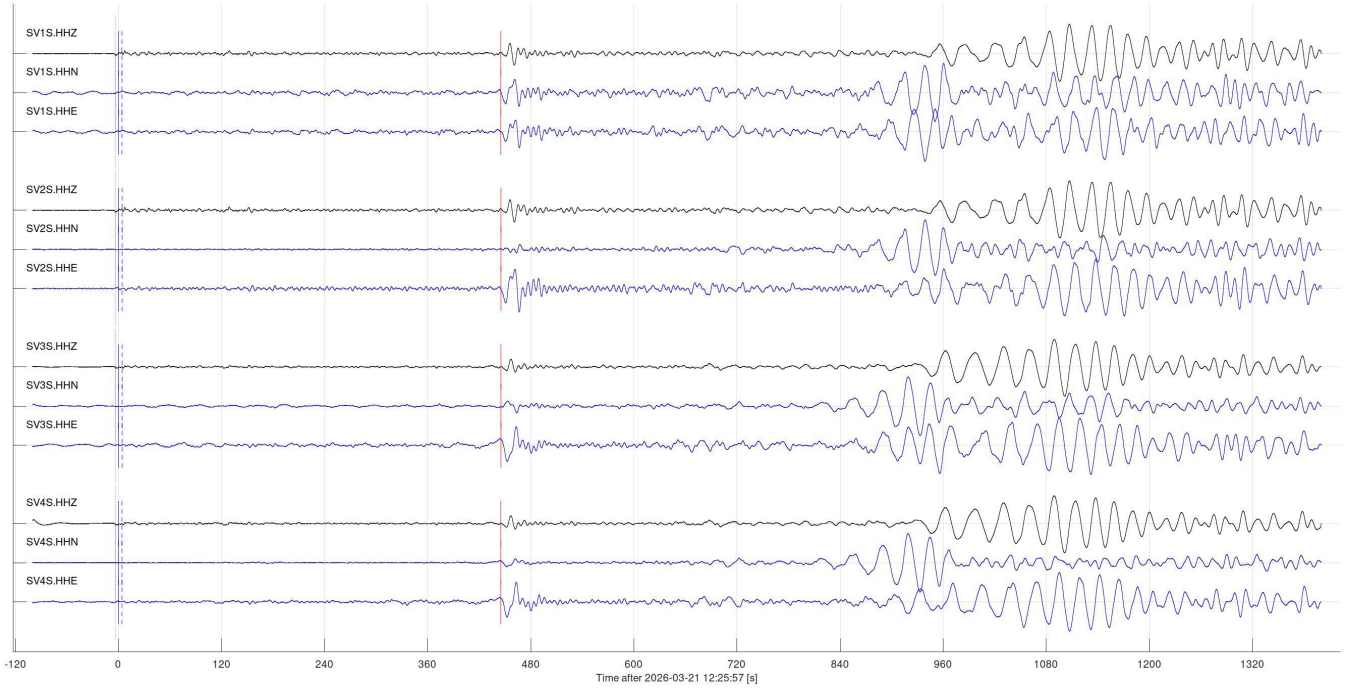


Figure 6, continued.

Event 40887 (us6000shlp, us): mww 6.6; 2026-03-20 00:22:02 61.15S,56.27W: South Shetland Islands
Vp=10.00 km/s; Vs=5.77 km/s; baz=156.8 deg; dist=116.2 deg (12951.6 km); depth=4.87 km

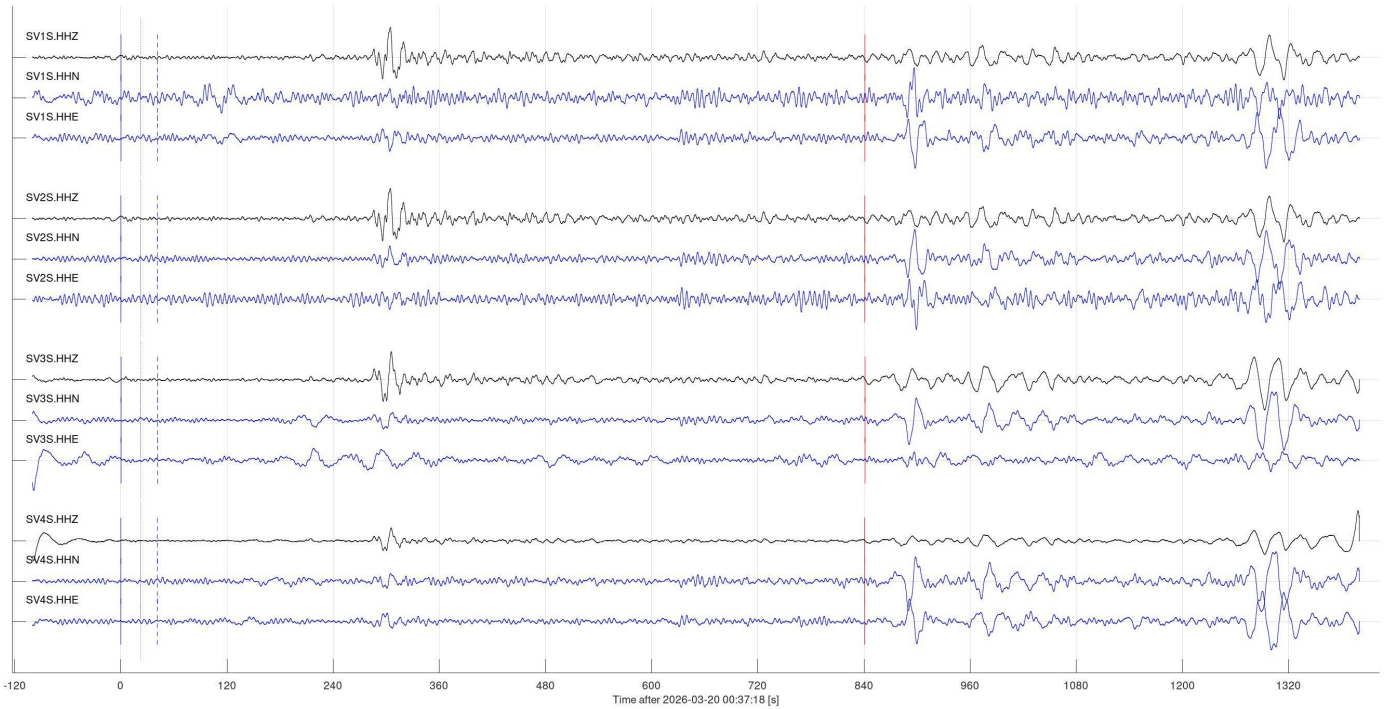


Figure 6, continued.

Event 41056 (us6000sgrt, us): mww 5.8; 2026-03-17 04:28:25 19.84N,74.36W: 49 km SSW of Maisí, Cuba
Vp=10.00 km/s; Vs=5.77 km/s; baz=131.5 deg; dist=37.2 deg (4143.6 km); depth=12 km

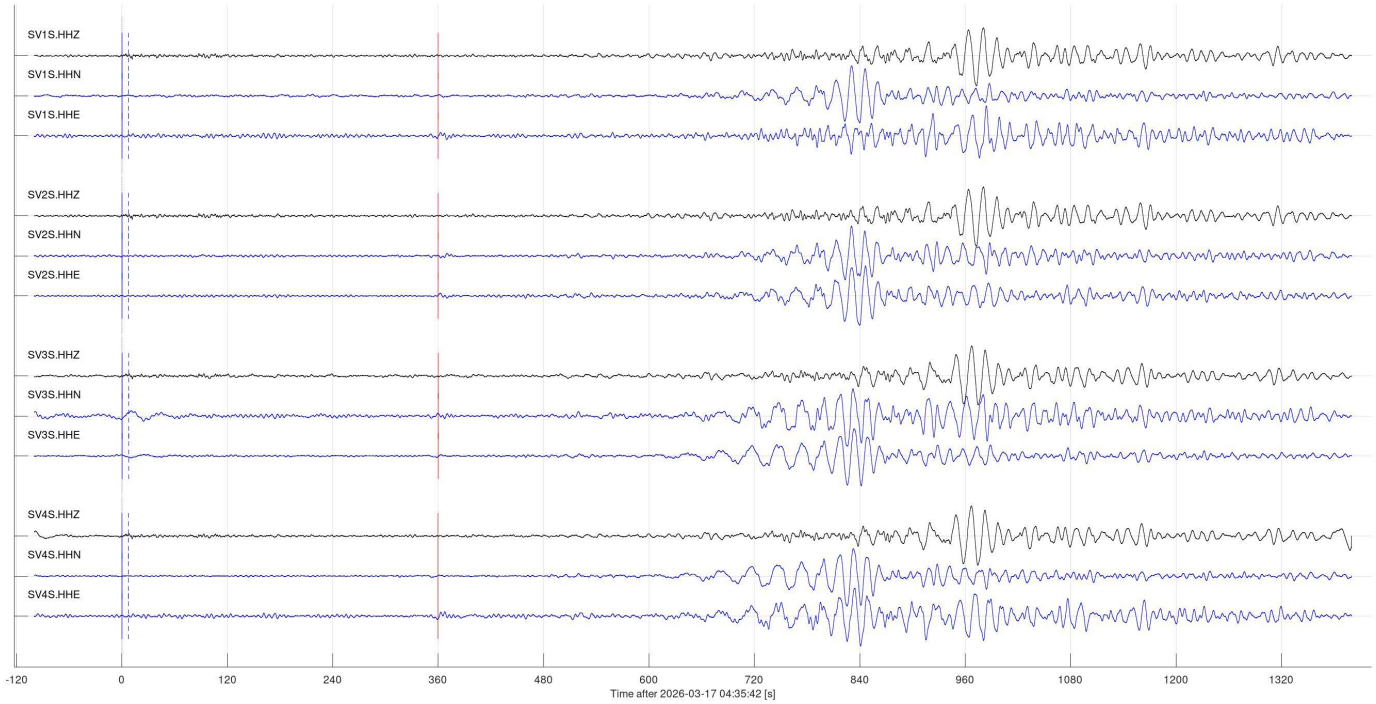


Figure 6, continued.

Event 41293 (us7000s7u4, us): mww 6.5; 2026-03-26 14:18:51 39.45N,143.37E: 122 km E of Yamada, Japan
Vp=10.00 km/s; Vs=5.77 km/s; baz=312.4 deg; dist=74.1 deg (8265.2 km); depth=9.51 km

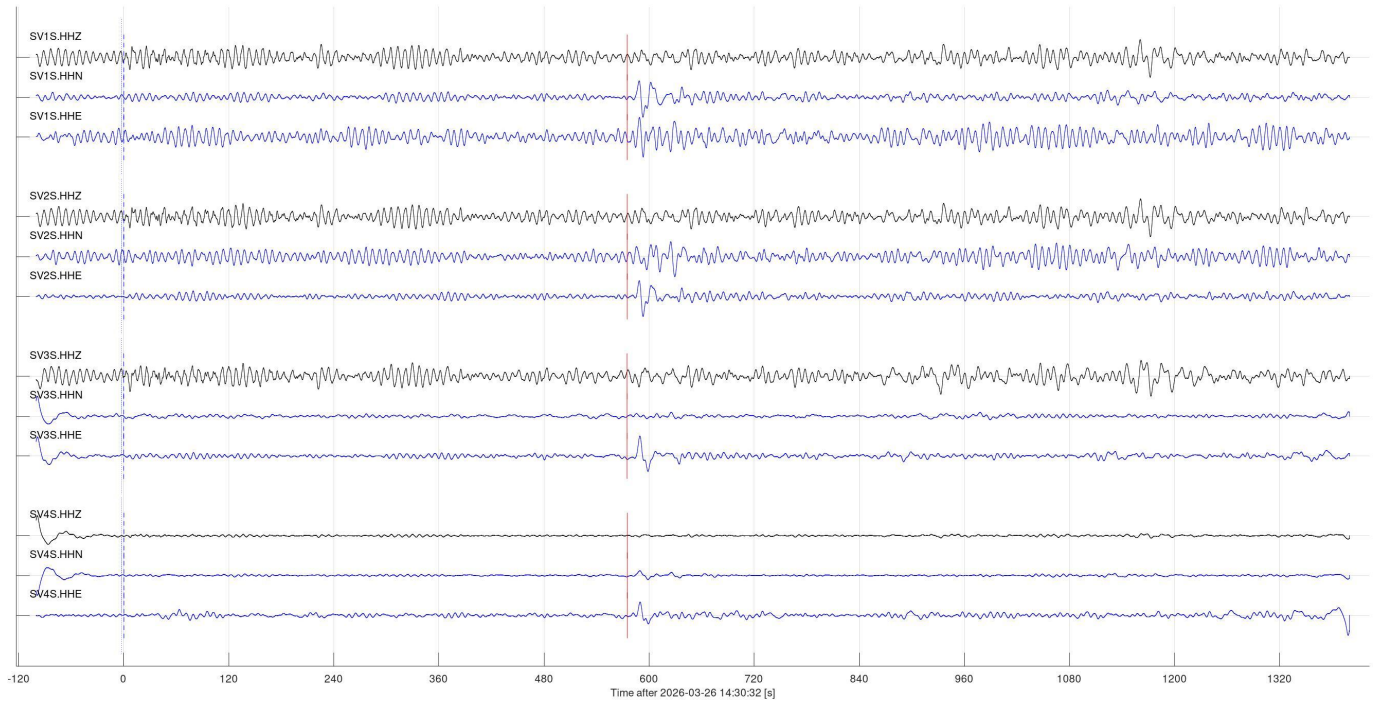


Figure 6, continued.

Event 41421 (us7000s789, us): mww 7.5; 2026-03-24 04:37:51 18.67S,175.56W: 166 km W of Neiafu, Tonga
Vp=10.00 km/s; Vs=5.77 km/s; baz=244.9 deg; dist=93.0 deg (10368.6 km); depth=229 km

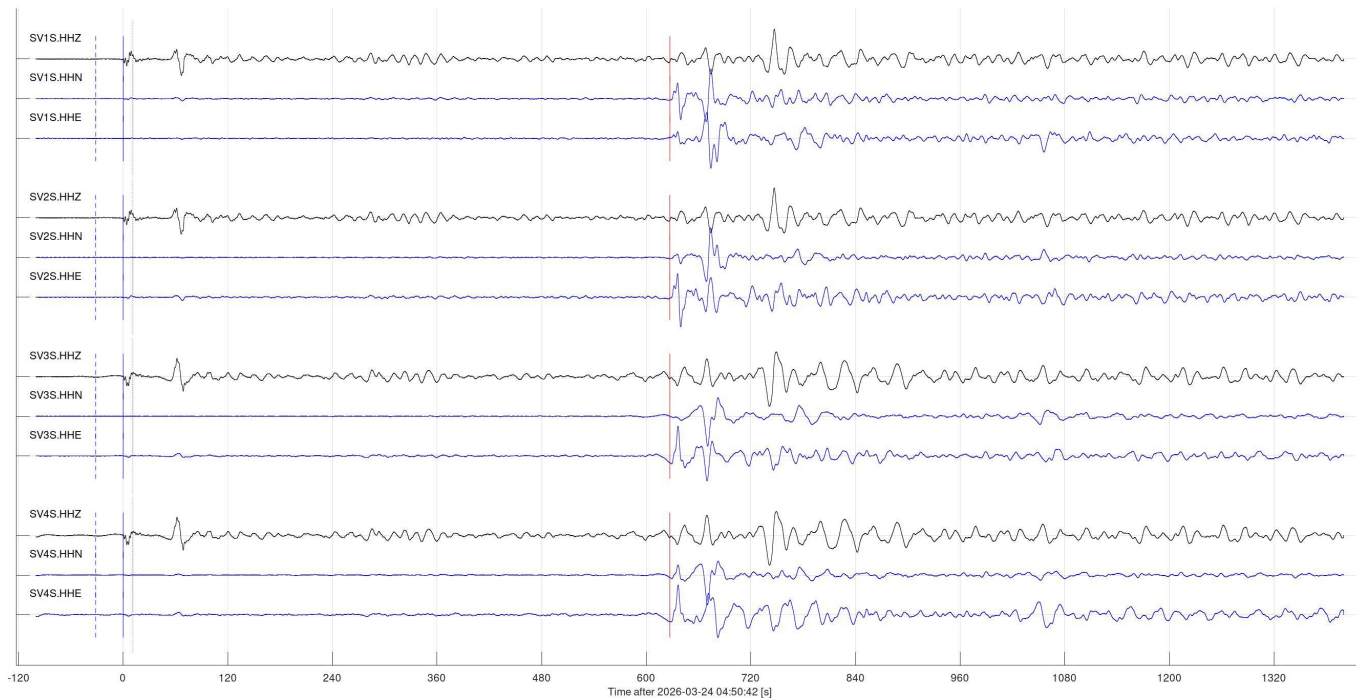


Figure 6, continued.

Event 41470 (us6000sisb, us): mww 5.8; 2026-03-23 06:02:46 15.36S,172.95W: 112 km NE of Hihifo, Tonga
Vp=10.00 km/s; Vs=5.77 km/s; baz=245.0 deg; dist=88.9 deg (9908.3 km); depth=10 km

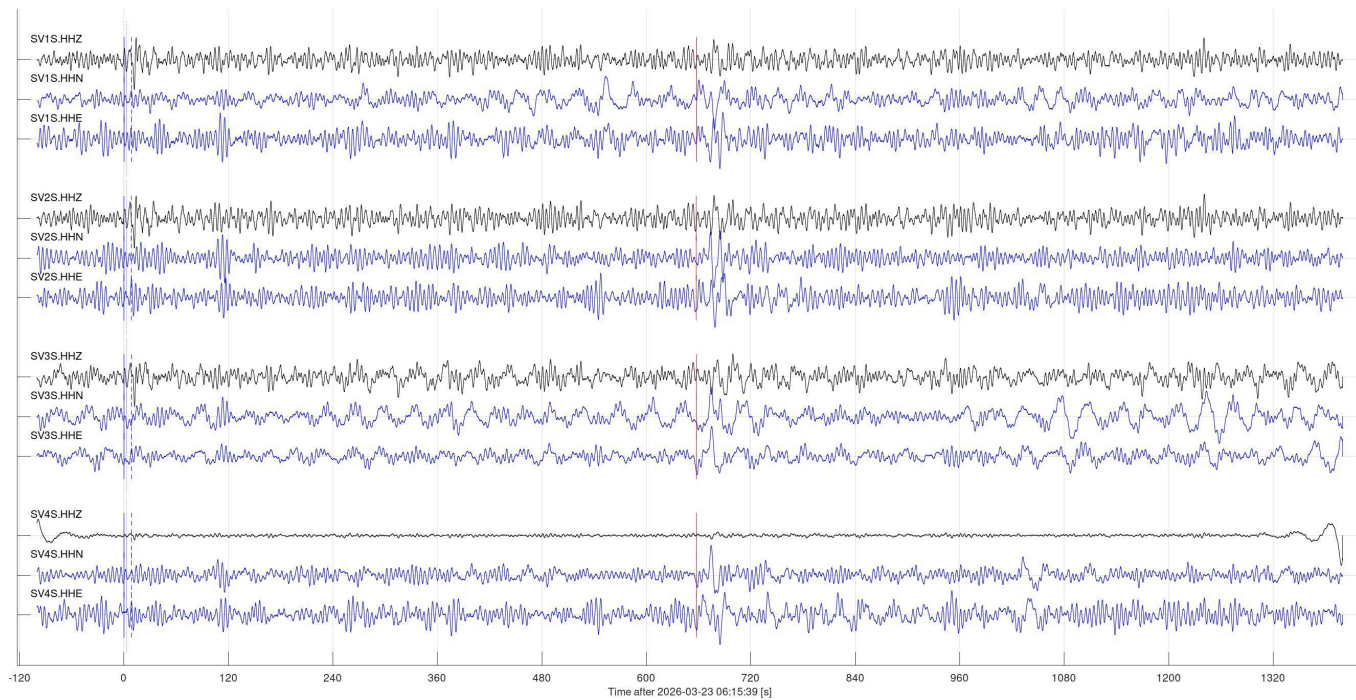


Figure 6, continued.

Event 41489 (us6000siln, us): mww 5.9; 2026-03-22 22:26:15 15.59S,172.84W: 109 km ENE of Hihifo, Tonga
Vp=10.00 km/s; Vs=5.77 km/s; baz=244.7 deg; dist=89.0 deg (9921.2 km); depth=13 km

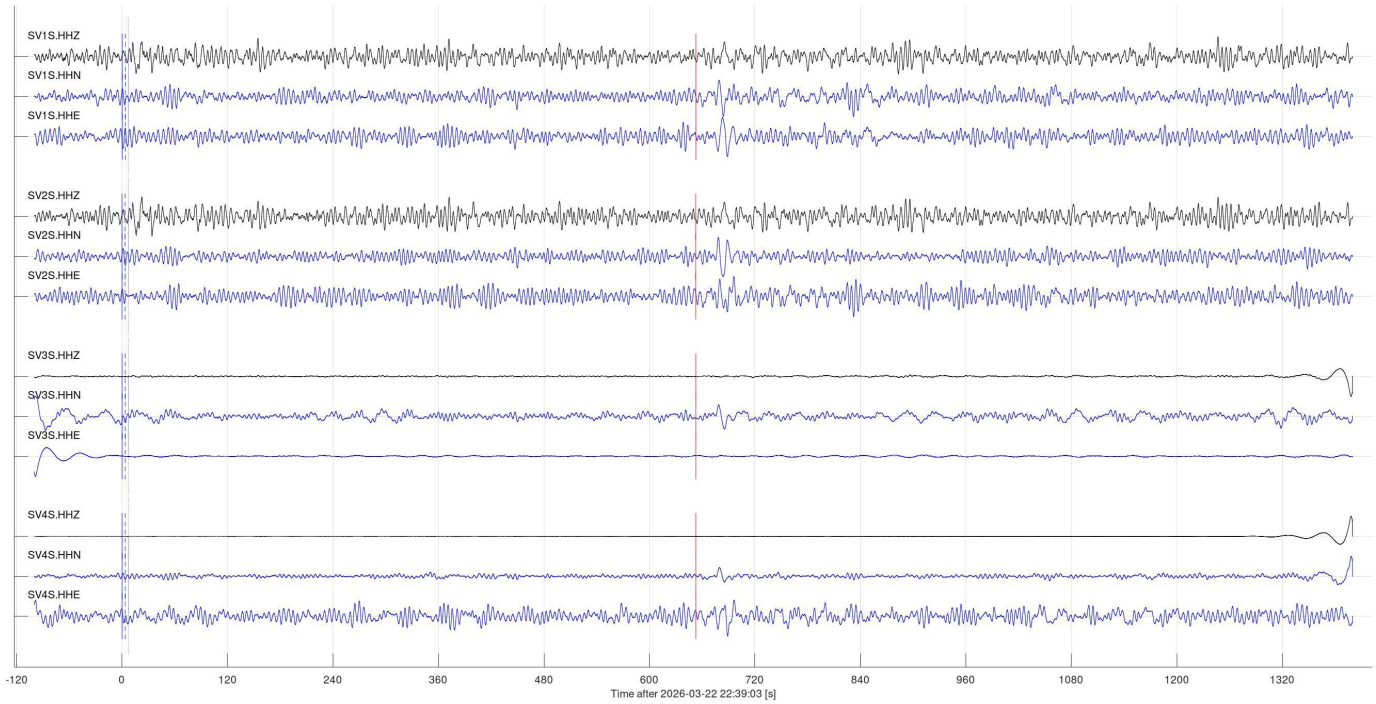


Figure 6, continued.

Event 41508 (us6000sii1, us): mww 6.3; 2026-03-22 15:30:37 15.23S,172.68W: 144 km NE of Hihifo, Tonga
Vp=10.00 km/s; Vs=5.77 km/s; baz=244.8 deg; dist=88.6 deg (9878.9 km); depth=10 km

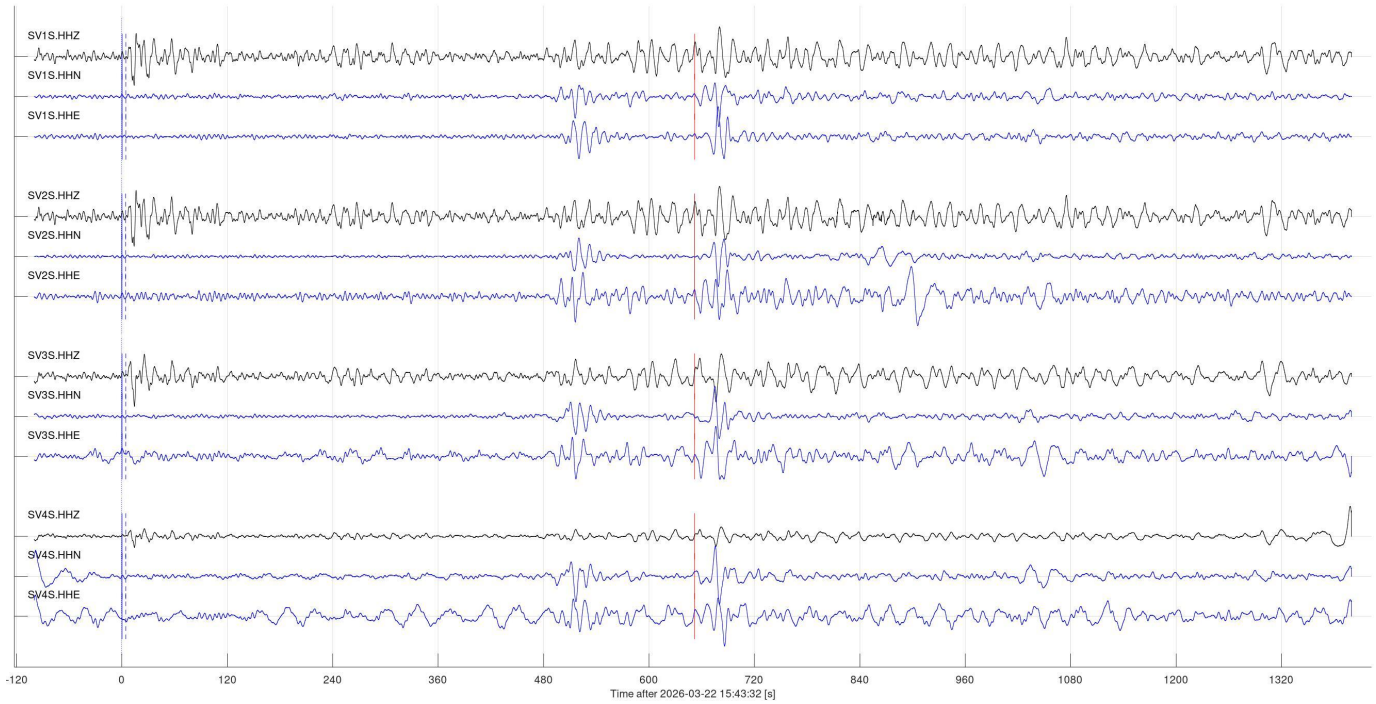


Figure 6, continued.

Event 41509 (us6000si0, us): mww 6.2; 2026-03-22 15:27:57 15.17S,172.51W: 149 km SSW of Lotofagā, Samoa
Vp=10.00 km/s; Vs=5.77 km/s; baz=244.7 deg; dist=88.5 deg (9862.6 km); depth=10 km

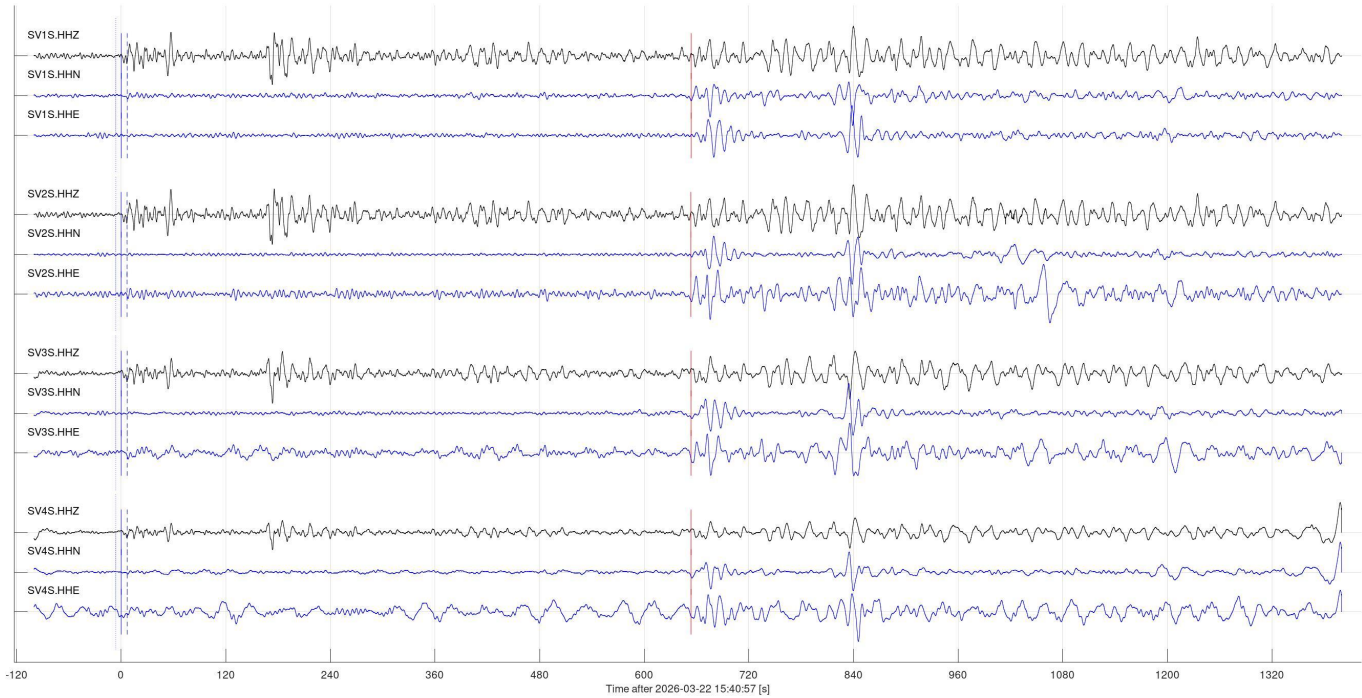


Figure 6, continued.

Event 41898 (us7000s8pl, us): mww 5.4; 2026-03-30 07:30:28 11.42N,86.89W: 58 km SW of Masachapa, Nicaragua
Vp=10.00 km/s; Vs=5.77 km/s; baz=154.8 deg; dist=39.9 deg (4449.0 km); depth=58 km

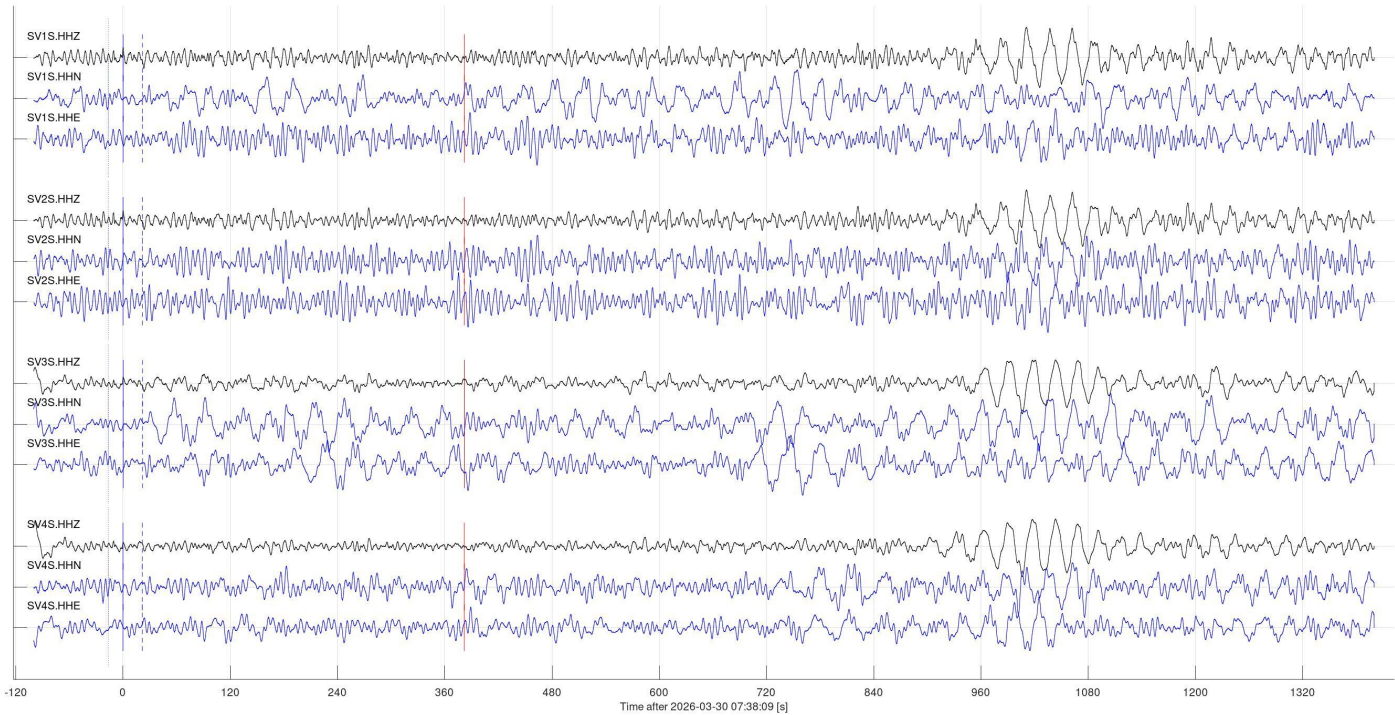


Figure 6, continued.

Regional events (class 2)

No regional seismic events (class 2 in Table 2) were identified at Aquistore stations in the reporting period.

Local events (classes 3 and 4)

The following subsections summarize observations of event classes 3 and 4 in Table 2.

Possible mine blasts at the Estevan mine (class 3a)

Nineteen events were identified as mine blasts in the area of Estevan coal mining (Figure 8).

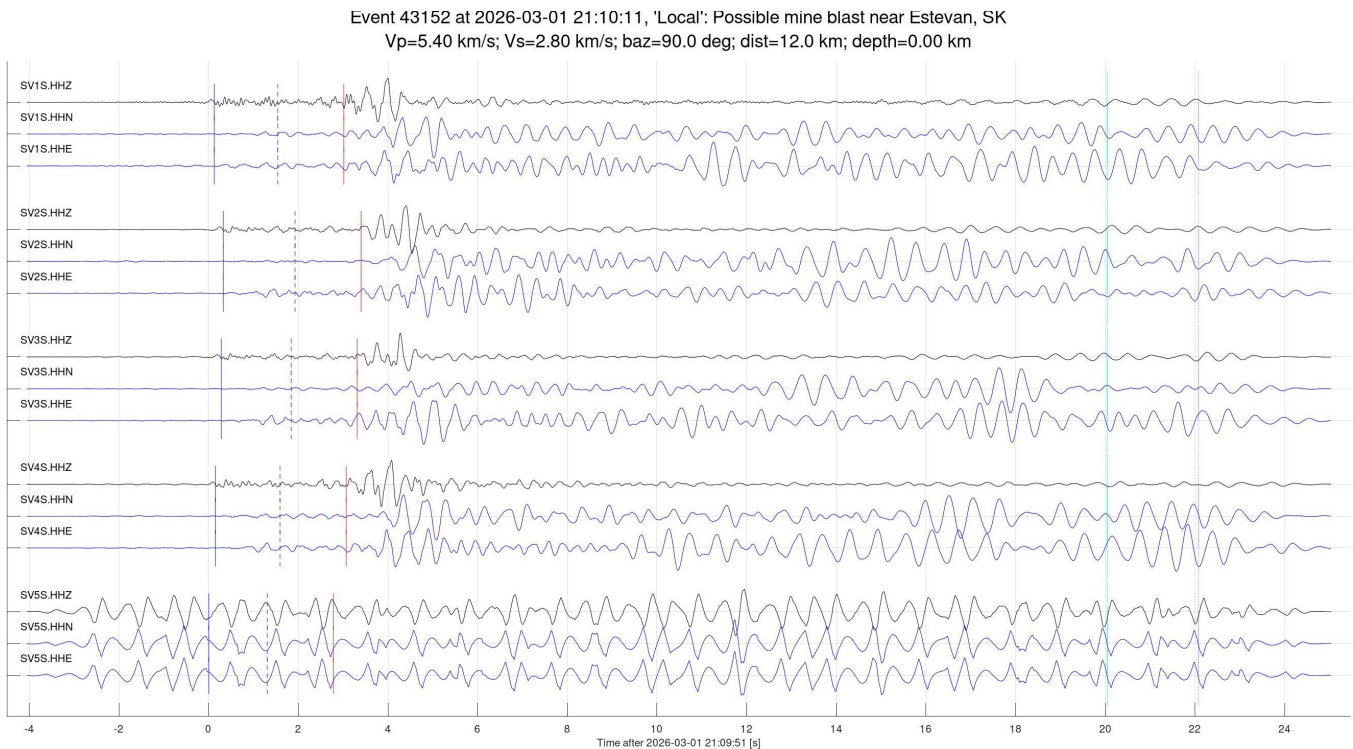


Figure 8. Seismic arrivals produced by mine blasts at the Estevan mine. Colours and labels are as in Figure 6.

Event 43153 at 2026-03-02 21:12:58, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

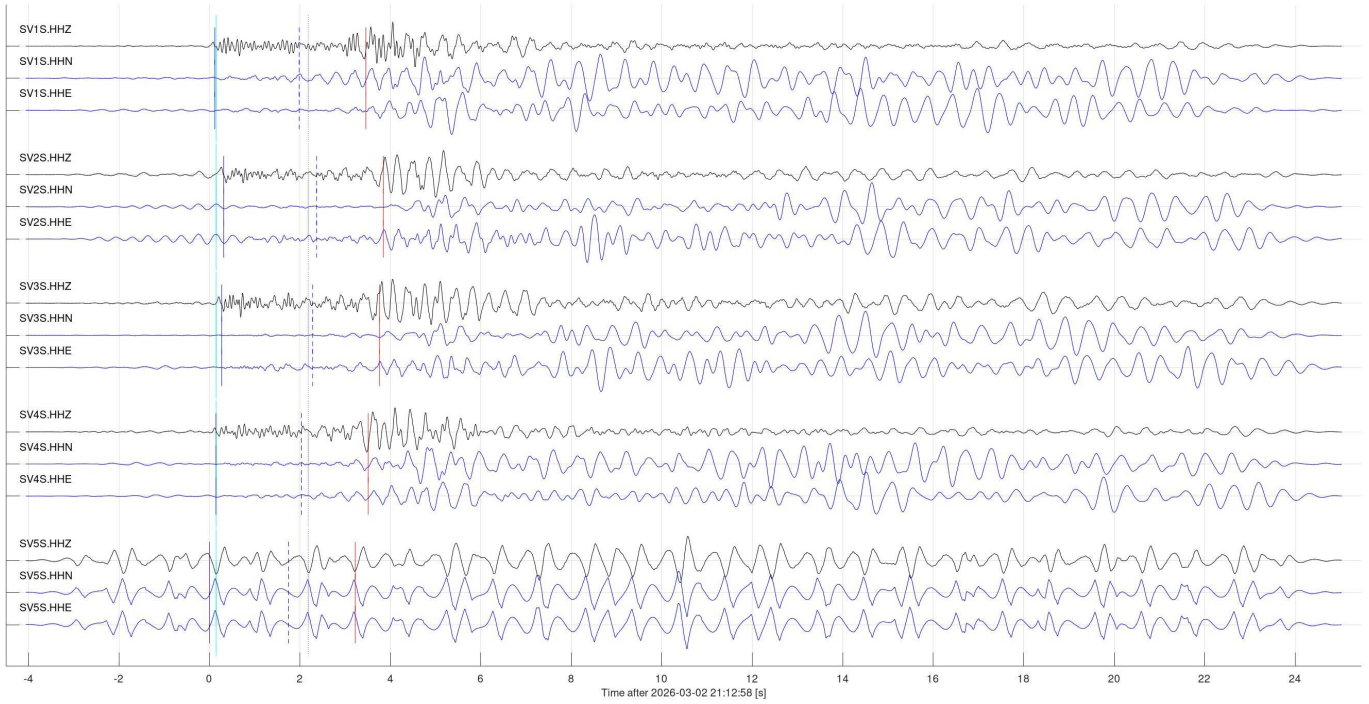


Figure 8, continued.

Event 43154 at 2026-03-04 21:12:31, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

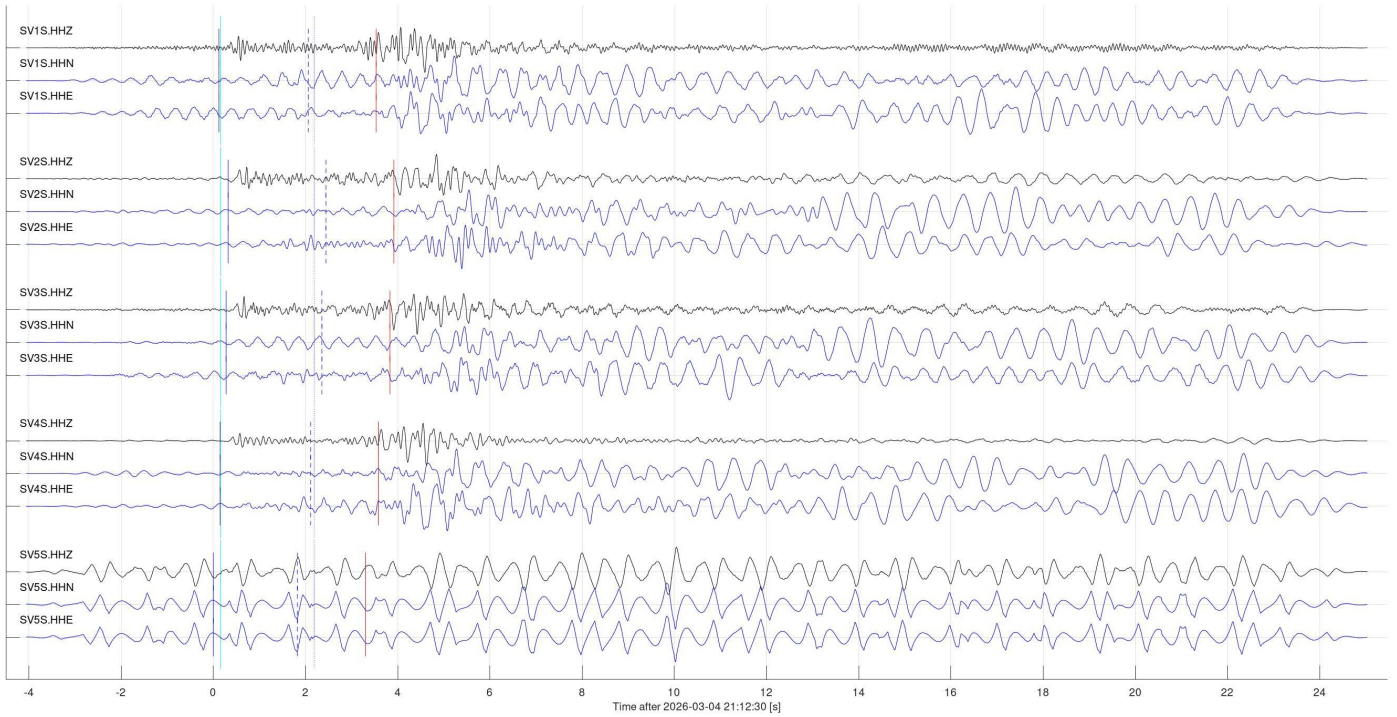


Figure 8, continued.

Event 43155 at 2026-03-05 21:22:29, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

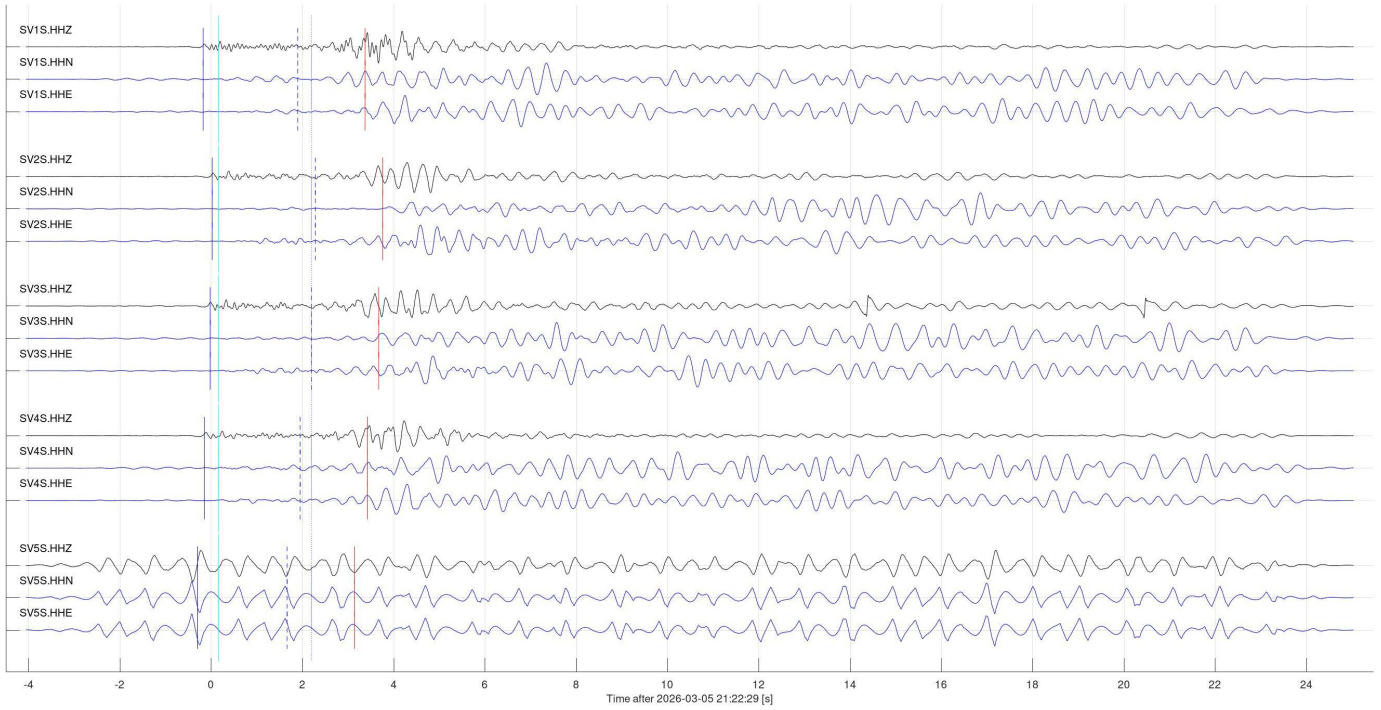


Figure 8, continued.

Event 43159 at 2026-03-10 21:18:32, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

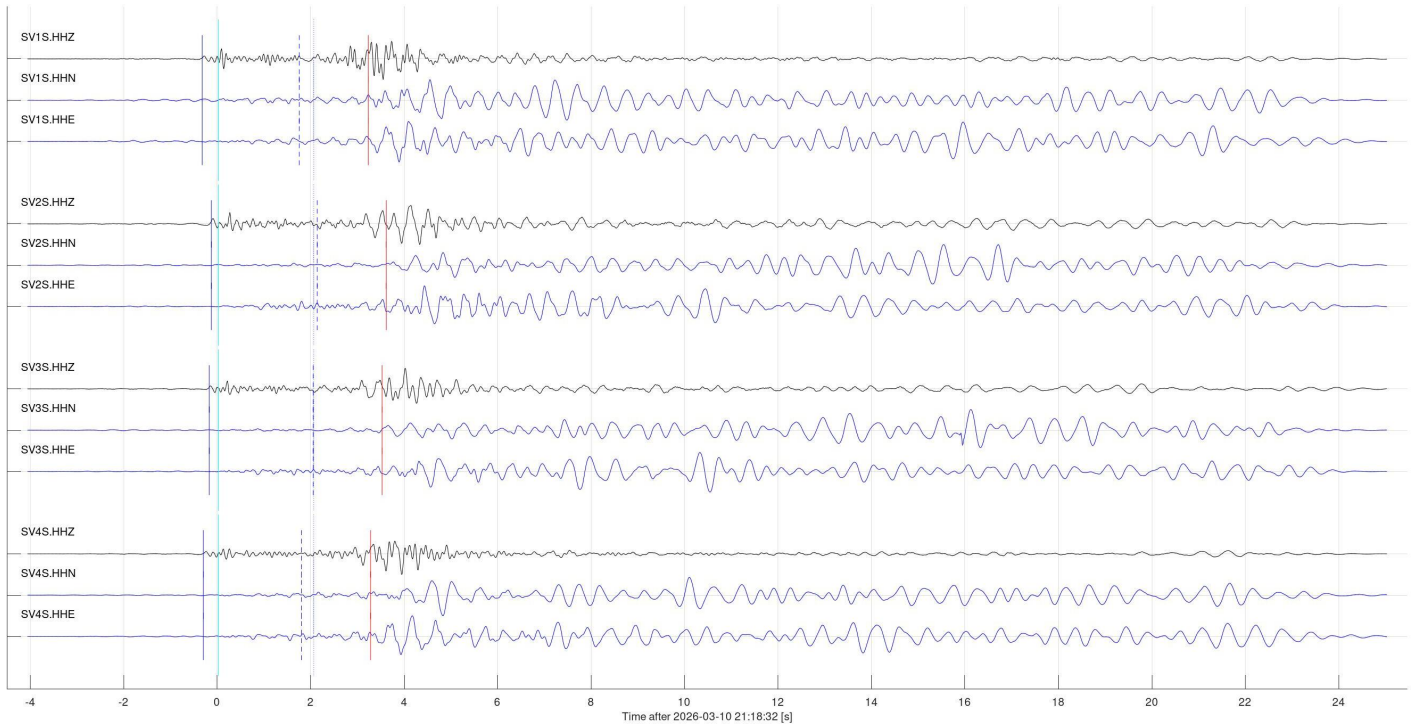


Figure 8, continued.

Event 43160 at 2026-03-11 21:13:29, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

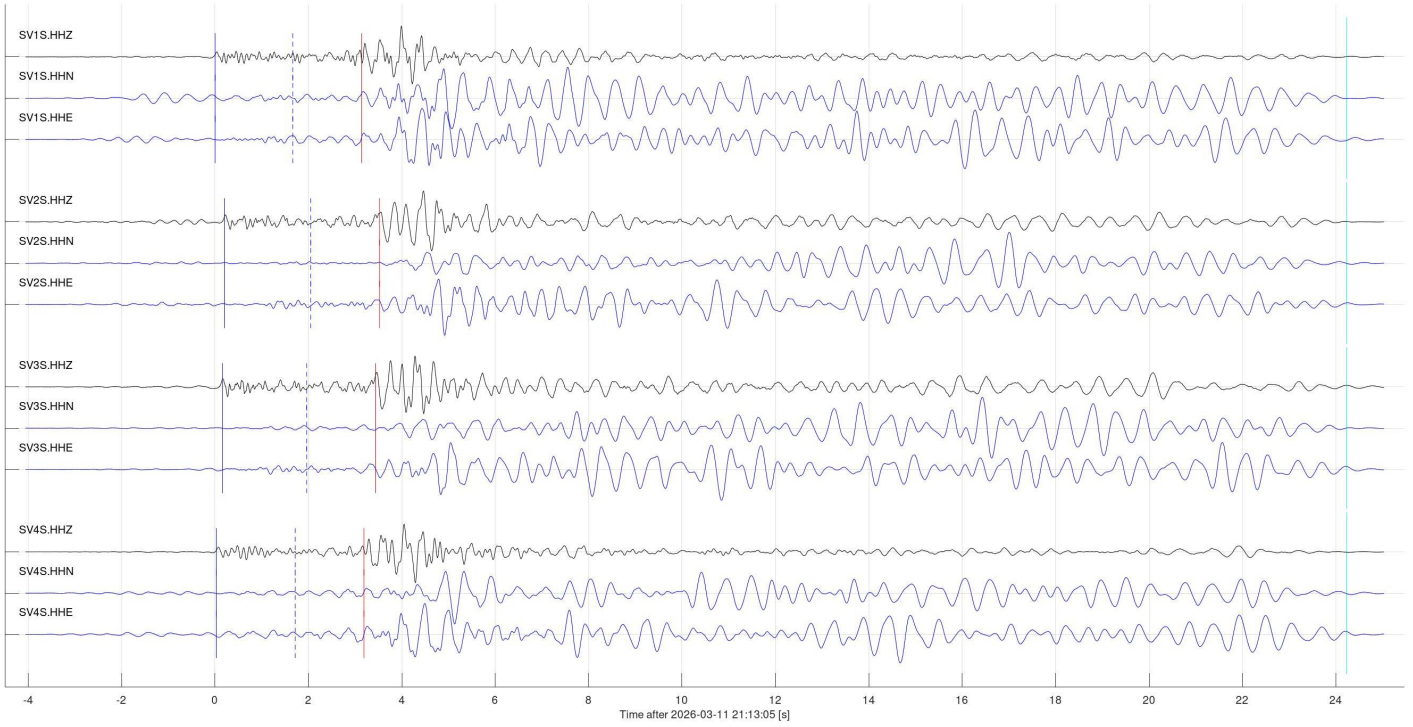


Figure 8, continued.

Event 43161 at 2026-03-14 22:03:24, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

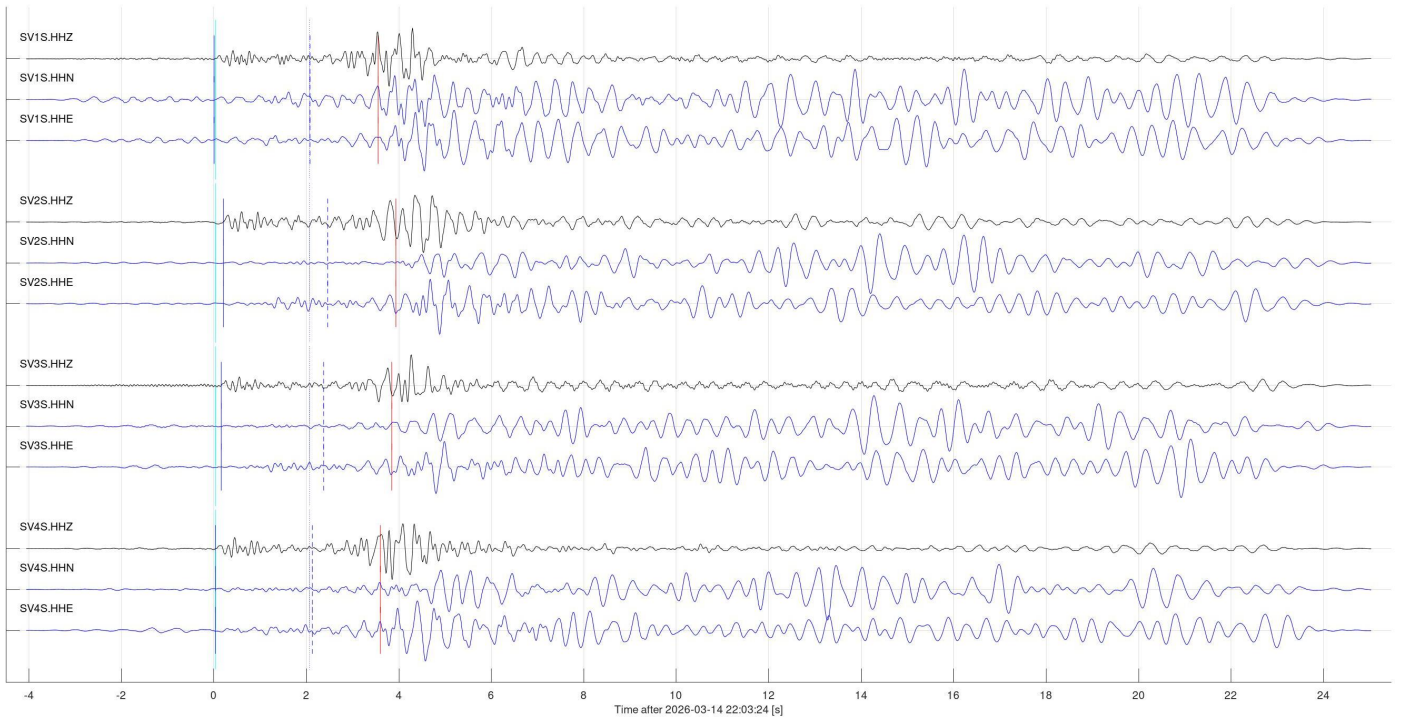


Figure 8, continued.

Event 43162 at 2026-03-15 21:42:15, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

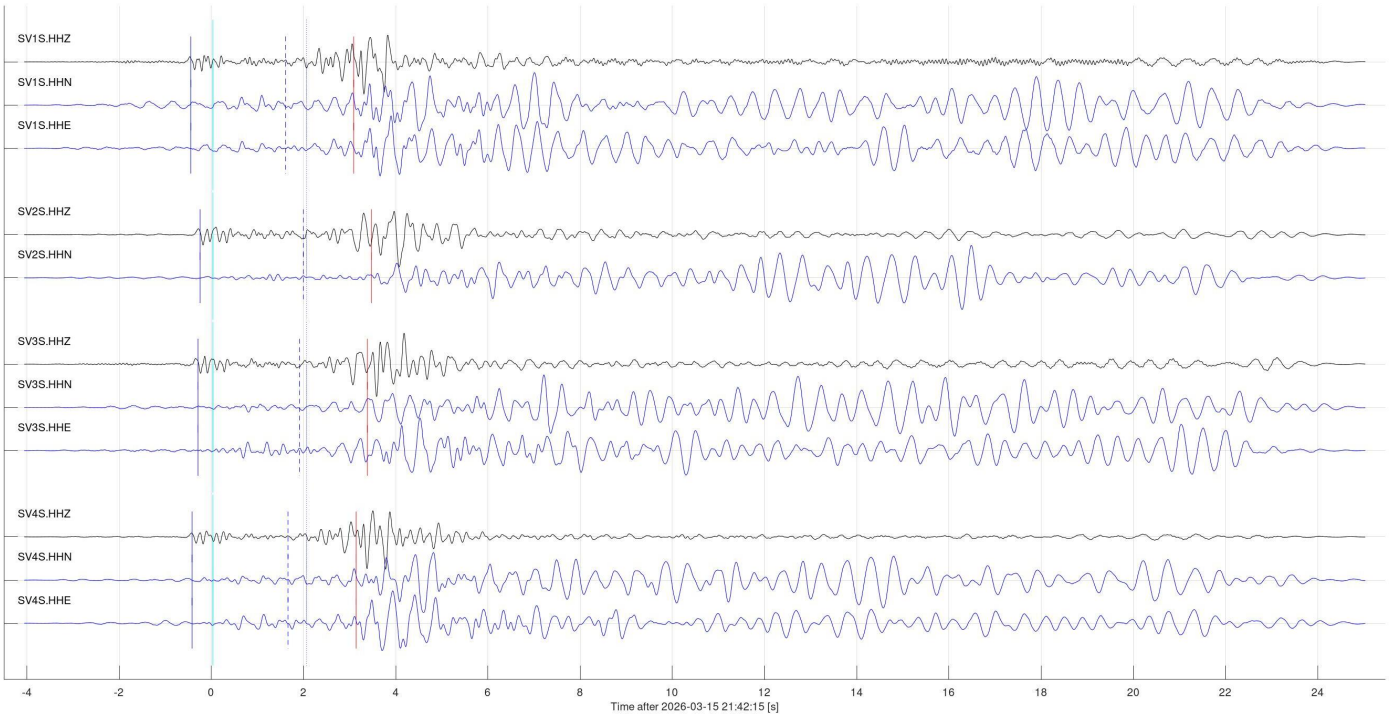


Figure 8, continued.

Event 43163 at 2026-03-16 21:05:01, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

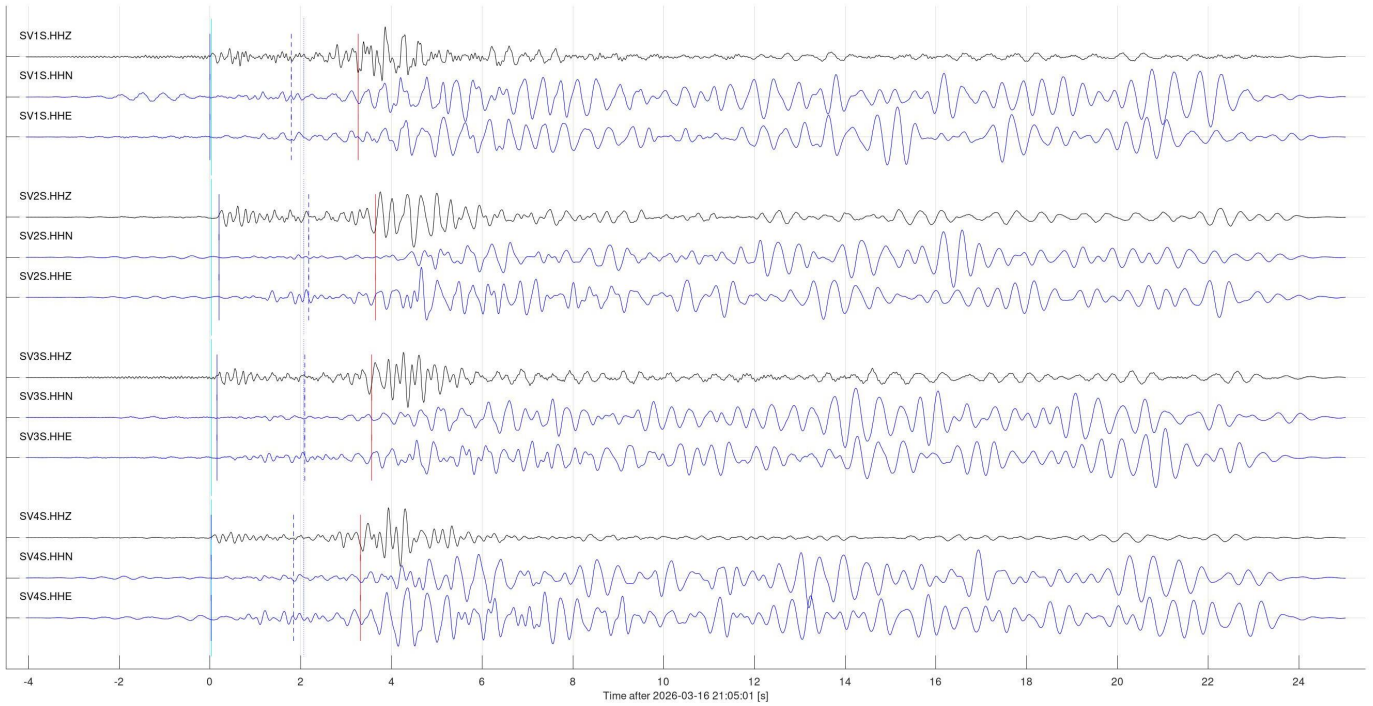


Figure 8, continued.

Event 43164 at 2026-03-17 21:27:49, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

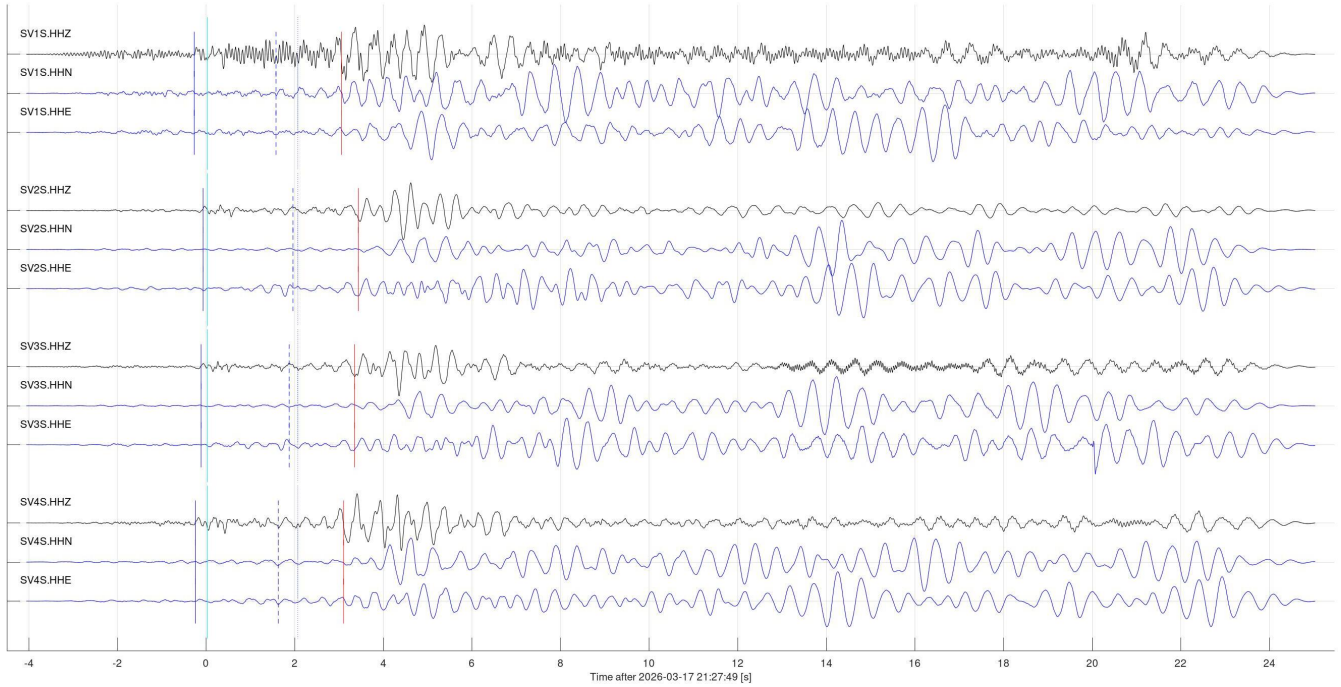


Figure 8, continued.

Event 43166 at 2026-03-18 21:03:59, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

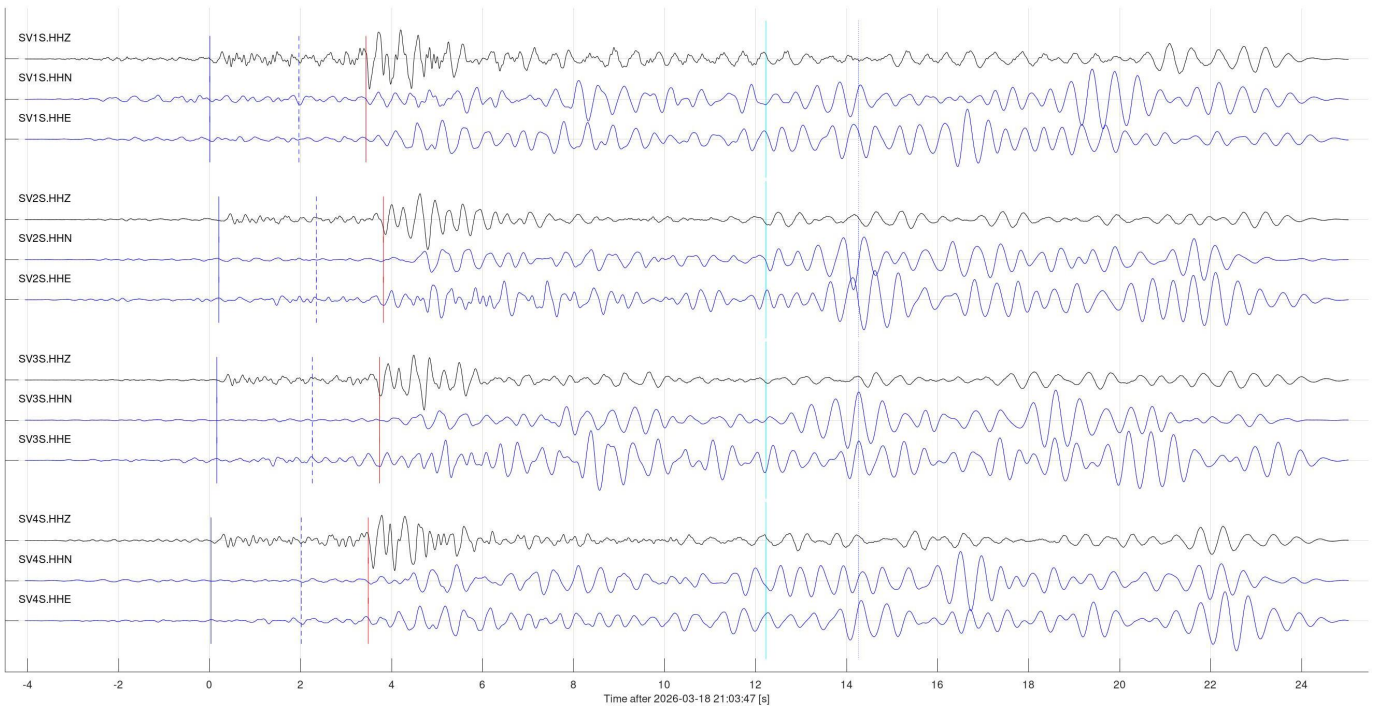


Figure 8, continued.

Event 43167 at 2026-03-19 21:23:49, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

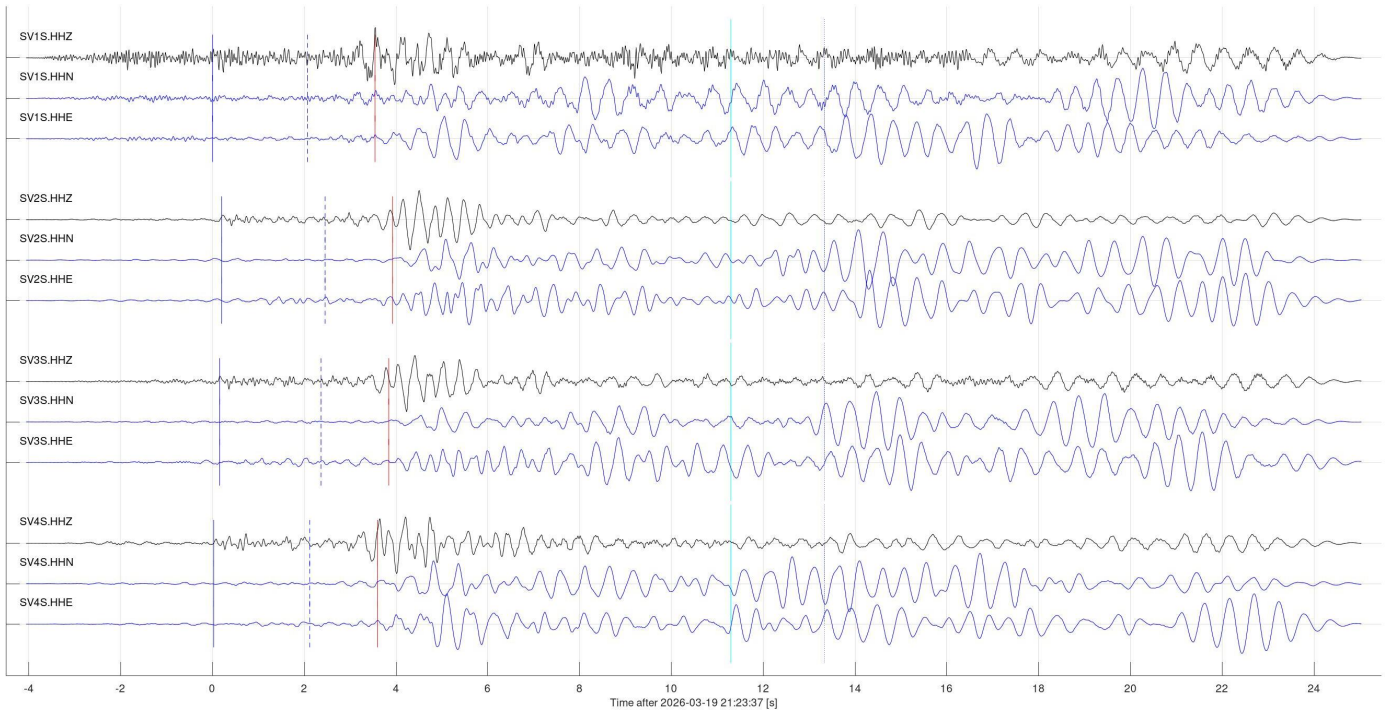


Figure 8, continued.

Event 43168 at 2026-03-22 21:15:04, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

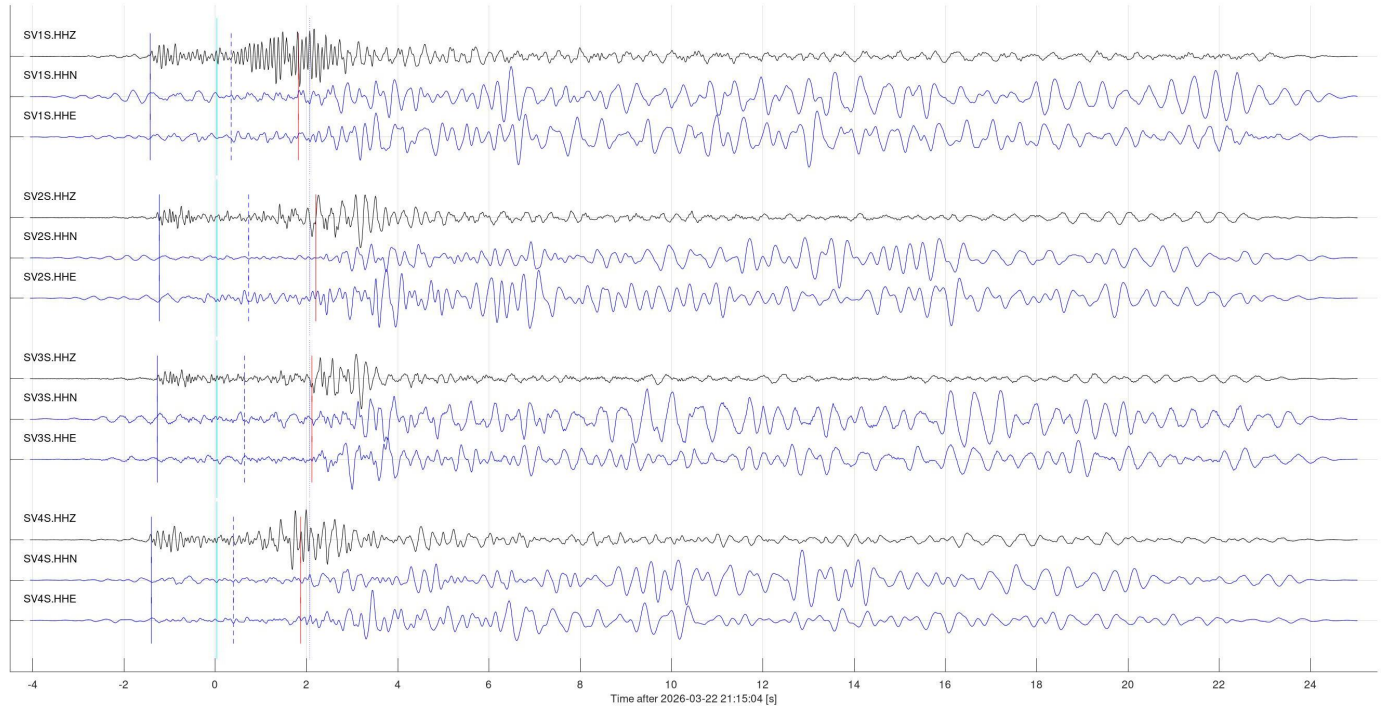


Figure 8, continued.

Event 43169 at 2026-03-23 21:19:58, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

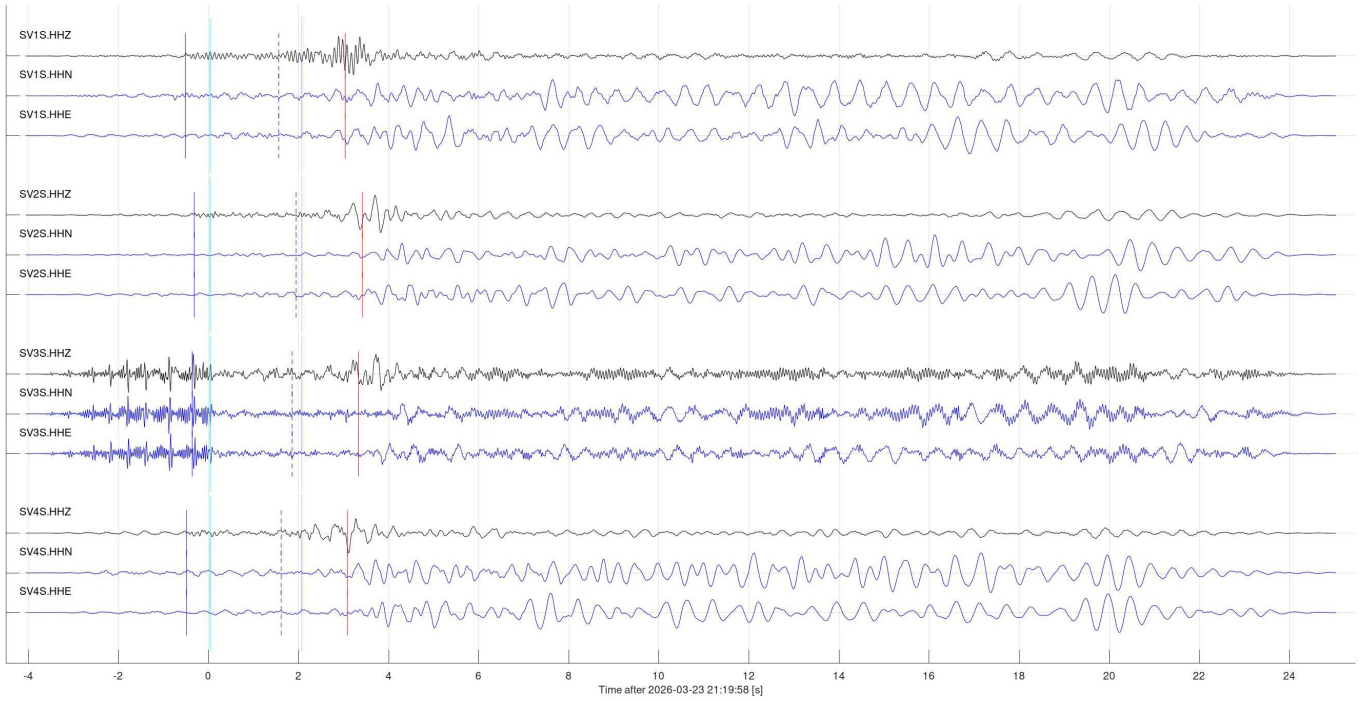


Figure 8, continued.

Event 43170 at 2026-03-24 21:24:17, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

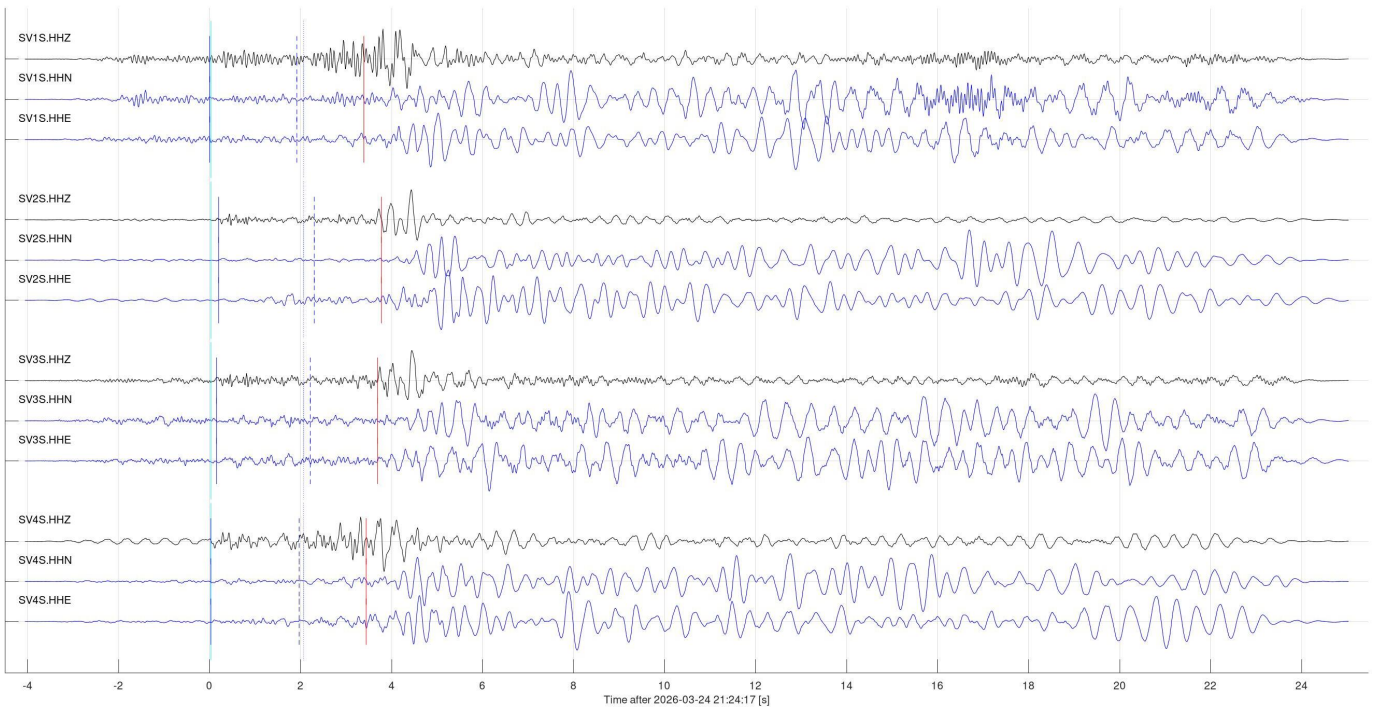


Figure 8, continued.

Event 43171 at 2026-03-25 21:18:32, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

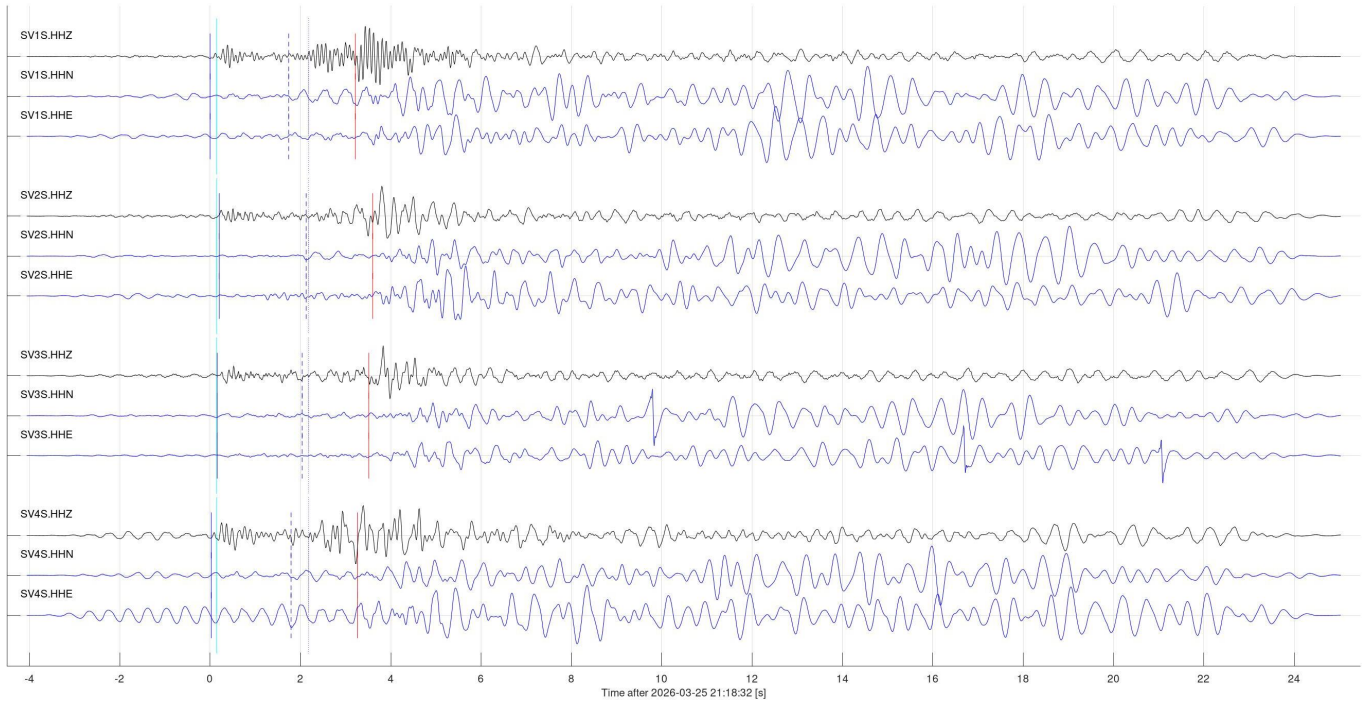


Figure 8, continued.

Event 43172 at 2026-03-26 21:03:01, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

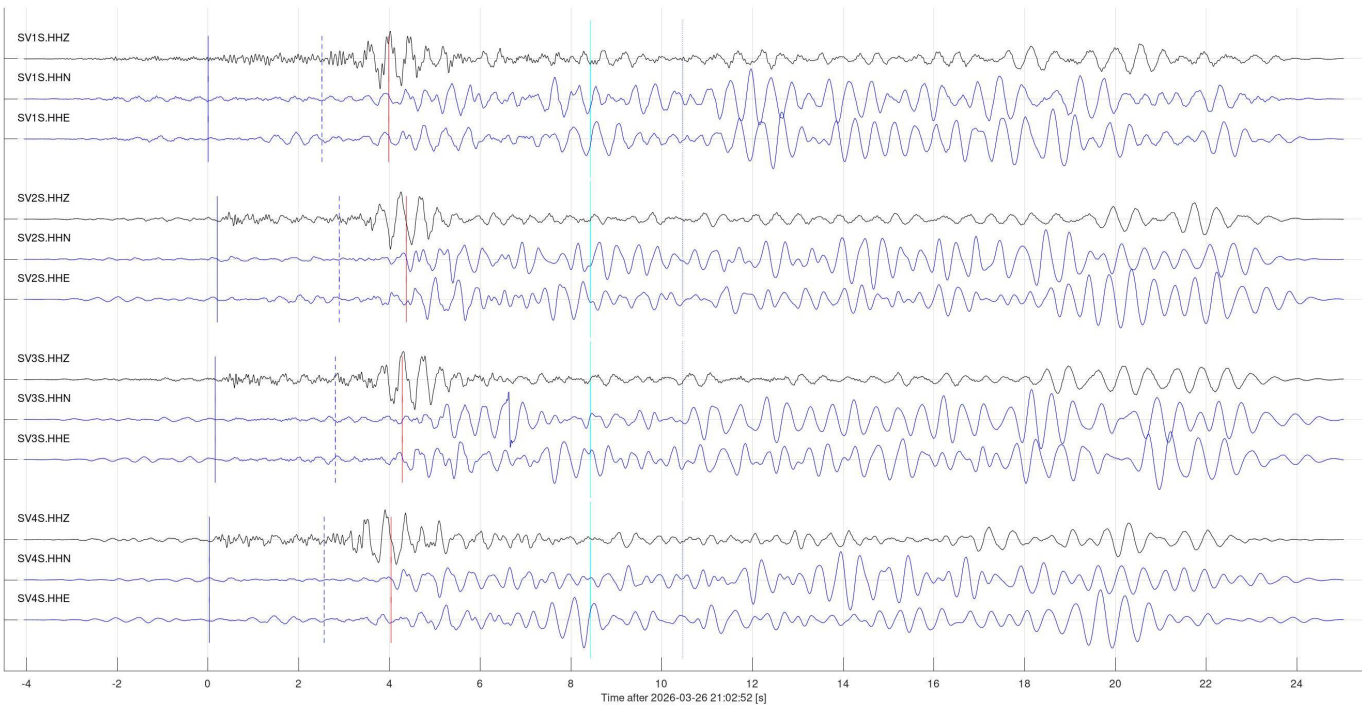


Figure 8, continued.

Event 43173 at 2026-03-27 21:28:51, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

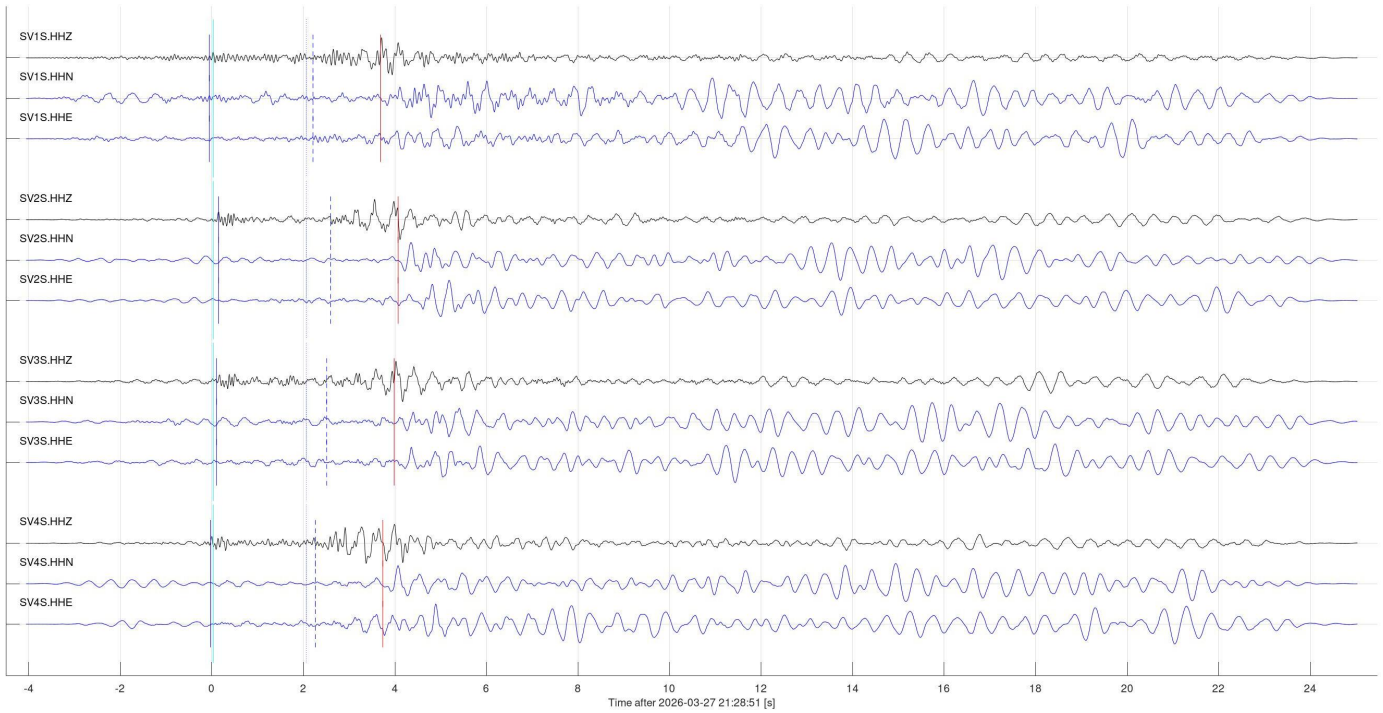


Figure 8, continued.

Event 43174 at 2026-03-28 21:30:44, 'Local': Possible mine blast near Estevan, SK
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

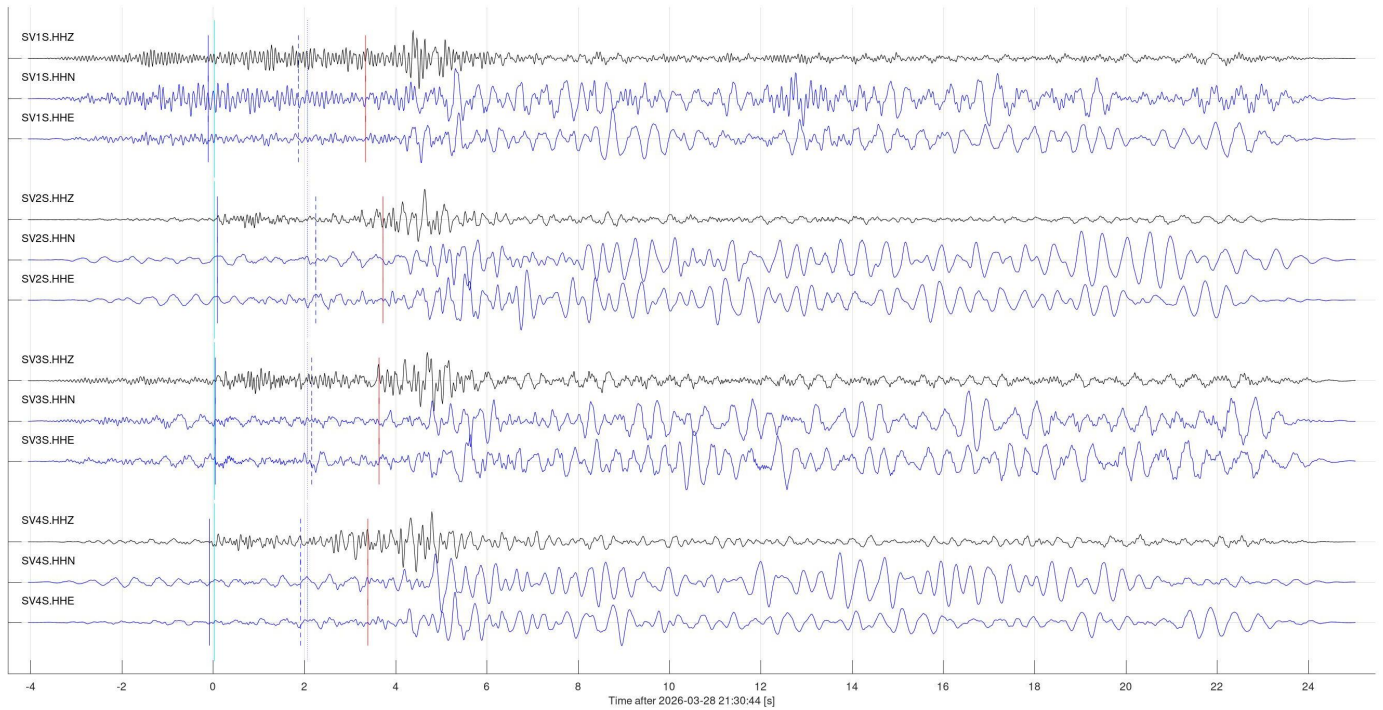


Figure 8, continued.

Events related to mining operations (class 3b)

Numerous mining- and industrial-operations related seismic events were observed in the area. Many such events may be produced by trains. Figure 9 illustrates two such events.

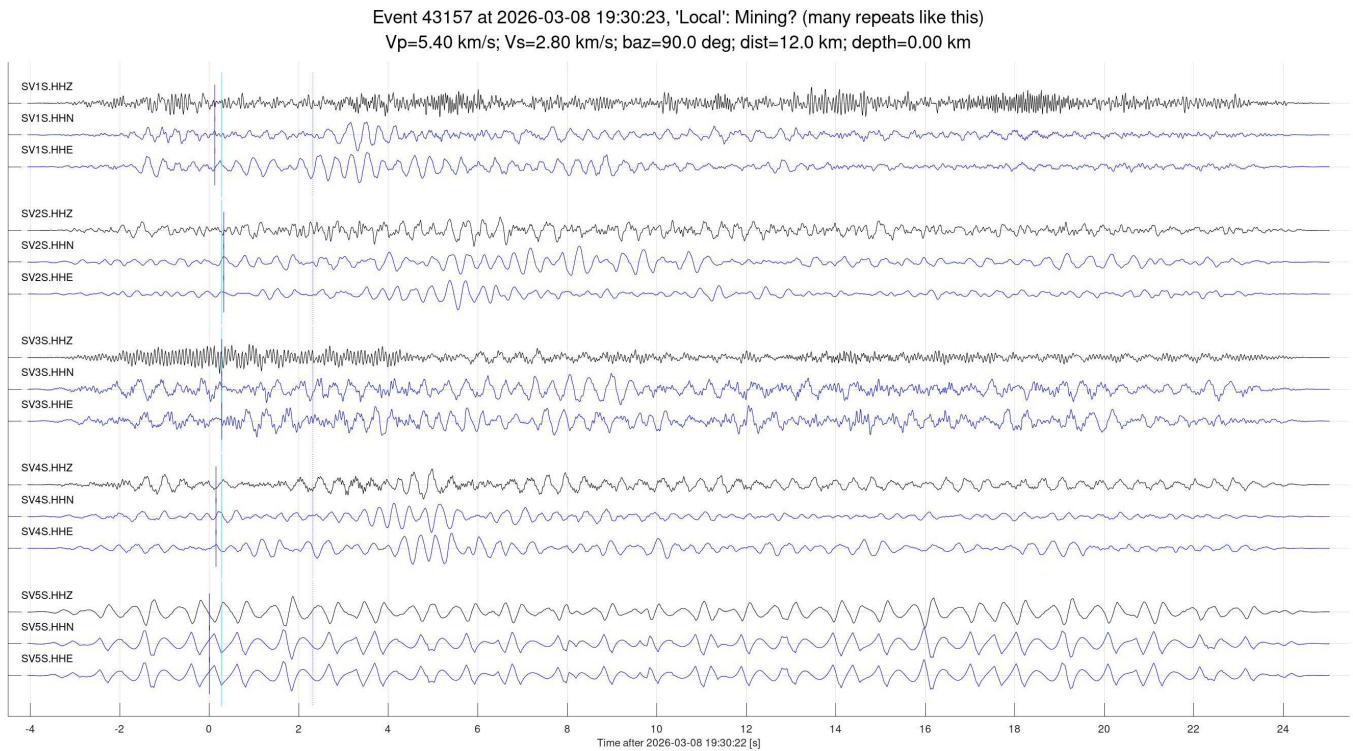


Figure 9. Sample events interpreted as due to mining activity in the area. Lines, colour bars and labels are as in the preceding figures.

Event 43158 at 2026-03-09 20:24:58, 'Local': Mining?
Vp=5.40 km/s; Vs=2.80 km/s; baz=90.0 deg; dist=12.0 km; depth=0.00 km

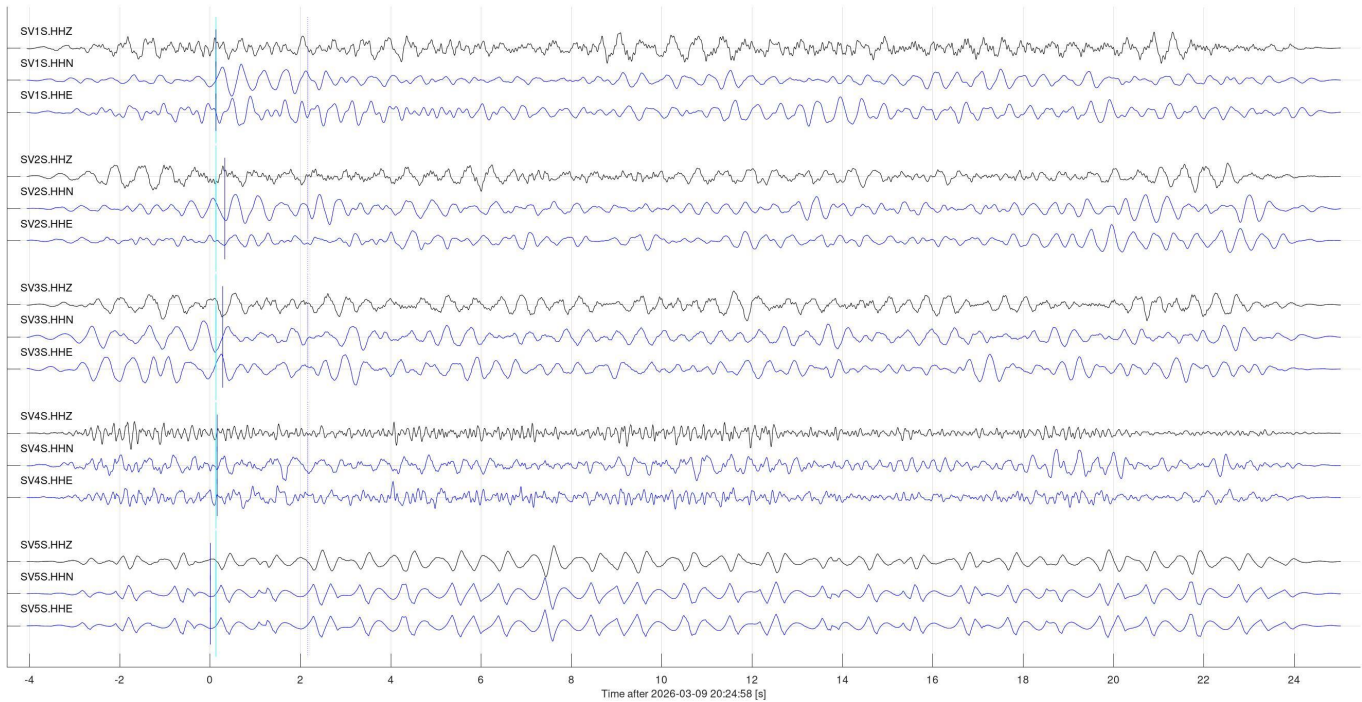


Figure 9, continued.

Events in array proximity (classes 4a and 4b)

Two seismic events were identified as possibly occurring in the proximity of the array (class 4a) (Figure 10). Clear identification of such events and separation from class 3b and recordings of trains is difficult. However, no events which could be related to class 4b (impulsive and higher-frequency) were found.

Event 43151 at 2026-03-01 19:03:28, 'Near': Strong train noise nearby?
Vp=2.40 km/s; Vs=1.20 km/s; baz=90.0 deg; dist=1.0 km; depth=0.00 km

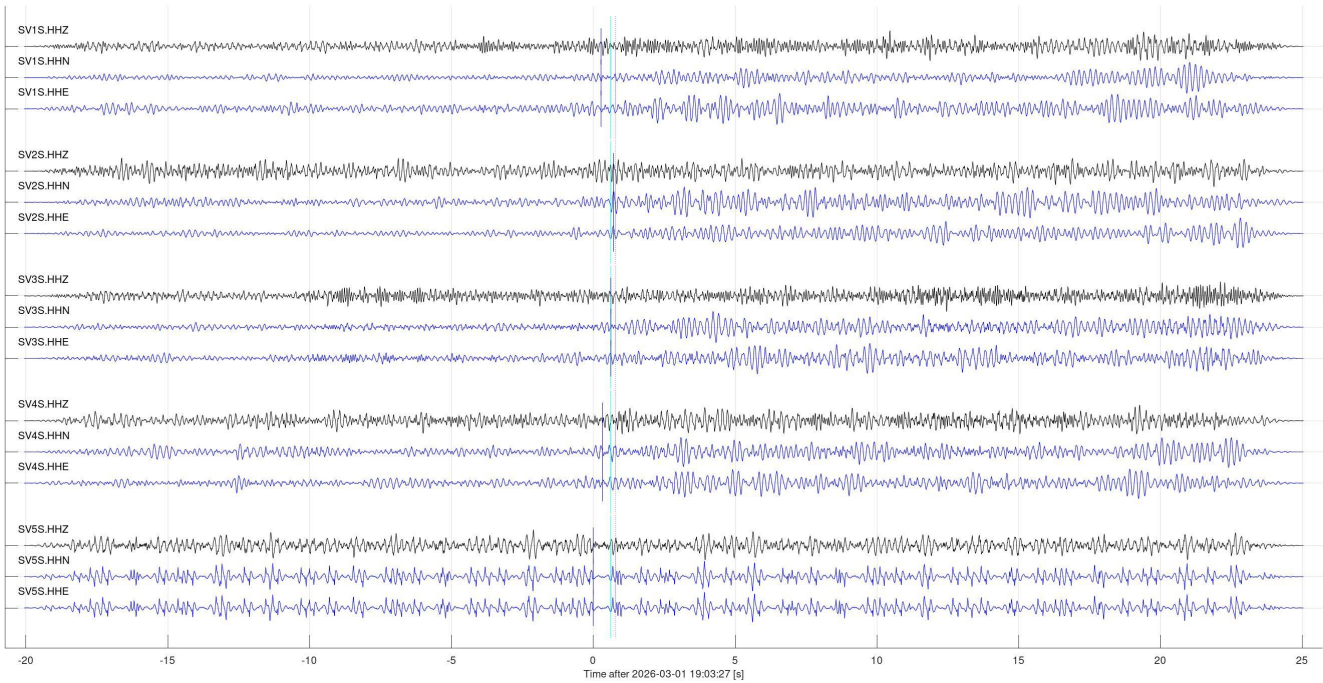


Figure 10. Events interpreted as occurring near surface in the proximity of the array (class 4a in Table 2). Lines, colour bars and labels are as in the preceding figures. Seismic velocity estimates shown in the headers (particularly P-wave) are from an averaged model and require further analysis.

Event 43165 at 2026-03-18 20:52:23, 'Near': Near
Vp=2.40 km/s; Vs=1.20 km/s; baz=90.0 deg; dist=1.0 km; depth=0.00 km

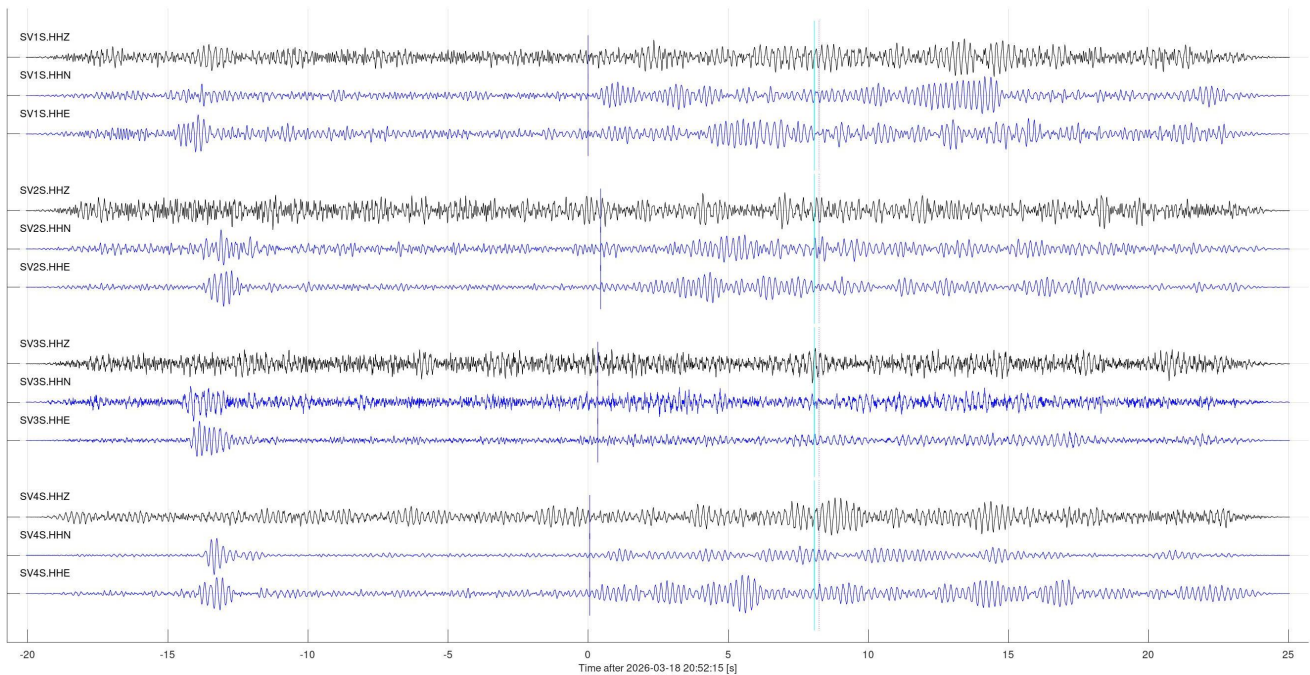


Figure 10, continued

5. *SEGY files*

Event time windows are provided in SEGY format in the attached zipped archive, separately for teleseismic and regional event detections. Subdirectory names and file naming convention and header formats are described in our reports for August and October 2024.

6. *Conclusions and recommendations*

Seismic array operation:

- Station uptime and data retrieval was nearly 100% in March 2026, except for station SV5S which was taken offline on March 10.
- Station SV5S has a failed sensor (possibly sensor cable) and produced no usable data in March. This station urgently needs a replacement or repair of the sensor.
- Investigation of the options for replacing the cell-modem routers is currently underway.

Data and observations:

- 21 teleseismic events, no regional events, and 19 mine blasts were detected in March 2026.
- Numerous local events were also detected, likely related to mining operations or freight trains. These events were not catalogued or analyzed in detail.
- Two events possibly occurring near-surface in the vicinity of the array were noted. These events are difficult to identify and separate from the industrial and railroad-related noise.
- No events occurring at the reservoir level were identified.

7. Appendix – Cellular routers recommended for replacement

Rafael Gonzalez has found the following power specs for the “ultra-low power” Sierra RV55 modem router and for a similar device Perle IRG5410 (which seems to be a Canadian company). These modems are approved for use by Rogers, Bell, and Telus, but they do not mention SaskTel. This could be the reason why Sierra modems could not be connected to the current SaskTel network.

Note that the RV55 specs are about 10% better although this difference may be non-critical for operation. The difference could also be offset by a difference in purchase price, tariffs, and “buy Canadian” considerations (I have not checked on those). At the same time, I would still recommend using Sierra as a long-established and reliable name in router business. As I understand, until 2024, online operation of Aquistore GPS and seismic network was based on Sierra routers and Bell cellular networks.

Sierra RV55

<https://www.sierrawireless.com/router-solutions/rv55/>

Mode	Power Consumption	Current @ 12V	Use Case
Standby	53 mW	4.4 mA	Deep sleep; woken by timer or I/O trigger.
Idle (Linked)	900 mW	75 mA	Connected to network, no active data transfer.
Active (Typical)	~1.8 W	150 mA	Regular data transmission or GNSS tracking.
Active (Peak)	Up to 5.0 W	415 mA	Max upload speed or low-signal compensation.

Perle IRG5410

<https://www.perle.com/products/routers-gateways/irg5410-cellular-lte-routers.shtml>

Mode	Power Consumption	Current @ 12V	Use Case
Standby	53 mW	4.4 mA	Lowest power state; requires trigger to wake.
Idle (Linked)	~1.0 W	83 mA	Connected to the tower but no data is moving.
Active (Typical)	~2.0 W	165 mA	Active data polling or GPS tracking.
Active (Peak)	Up to 5.2 W	430 mA	Max LTE upload or poor signal conditions.