

Surface Seismic Monitoring Report Sulphur Mines Salt Dome Temporary Seismic Array

Report Period : March 1 to 14, 2023

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Summary:

- No seismic events were detected from March 1 to 14, 2023.
- All seven temporary stations are currently operational in the field area shown in Figure 1 during the reporting period.



Figure 1. Google Earth image showing the locations of the active temporary seismic array stations at Sulphur Mines dome.

Noise Analysis

The Root Mean Square (RMS) background noise levels for March 1-7 and 8-14 are shown in Figure 2. All stations except 4b show background noise levels below 1000 nm/sec, except during working periods. Stations 5b, 6a and 7a are the quietest stations in the array.

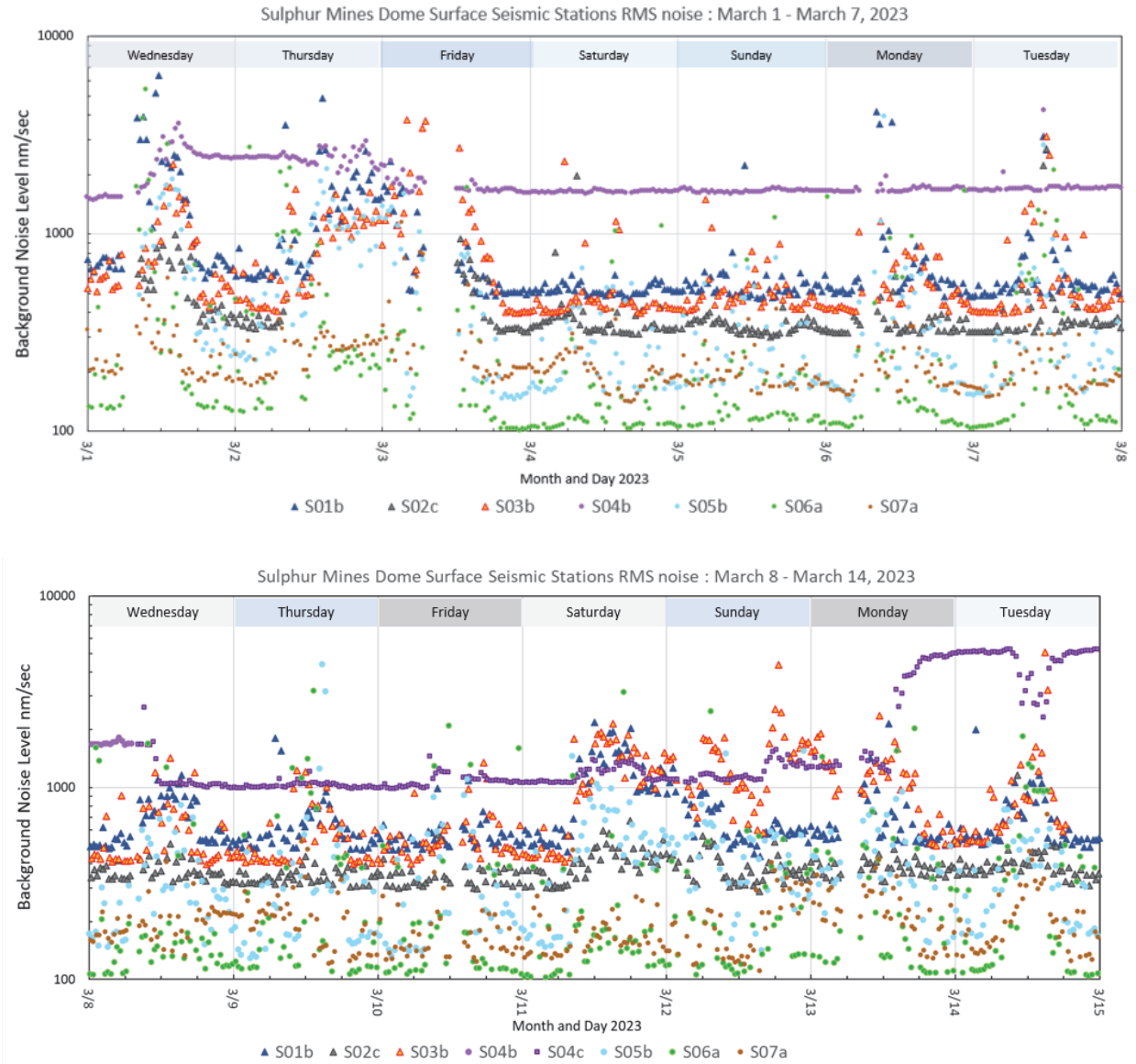


Figure 2. Background noise profiles from March 1-7, 2023 (upper) and March 8-14, 2023 (lower). Plots are a graph of the log of the RMS background ambient noise levels in nm/sec recorded on the seismic boxes at Sulphur Mines salt dome. The colored dots represent different stations, as indicated by key on bottom of graph. Time along the x-axis is Central Time Zone (CST) and (DST) starting on March 12 at 2 AM.

Appendix

Table 1. Seismic Station locations and operational dates at Sulphur Mines Dome (to March 14, 2023).

Station	LAT WGS84	LON WGS84	Date start	Date end
1a	30.257519	-93.412295	1/30/2023	2/9/2023
1b	30.253427	-93.413504	2/9/2023	
2a	30.257004	-93.409735	1/30/2023	2/9/2023
2b	30.255468	-93.413201	2/9/2023	2/27/2023
2c	30.254707	-93.413785	2/27/2023	
3a	30.253309	-93.409116	1/30/2023	2/9/2023
3b	30.256257	-93.414608	2/9/2023	
4a	30.248590	-93.412296	1/30/2023	2/27/2023
4b	30.250684	-93.412051	2/27/2023	3/8/2023
4c	30.250632	-93.410027	3/8/2023	
5a	30.250159	-93.415560	1/30/2023	2/27/2023
5b	30.250672	-93.415279	2/27/2023	
6a	30.253187	-93.416629	1/30/2023	
7a	30.254665	-93.416147	1/30/2023	