Microseismic Monitoring Report
Sulphur Mines Salt Dome – Louisiana (US)
Borehole and Surface Seismic Arrays

Michael Reese, 4/20/2026

Report Period: March 2026

Reference: 2634399-SUL-MR-260301

Report Review: Michael Reese – Baker Hughes LBPG #1428

LBPG review using results from Baker Hughes and Nanometrics Inc.

This review is based solely on microseismic monitoring results provided in the Baker Hughes March 2026 monthly report from the Baker Hughes microseismic team. The report results were passed through the Baker Hughes QA/QC microseismic processing workflows for accuracy and repeatability. No other information, data or observations from the Sulfur Mines Salt Dome operations were provided to support Baker Hughes report results for this PG review. Interpretation of the events is performed by Sulphur Mines Salt Dome. Details of processing and events are provided in the Baker Hughes March 2026 report (appended to this cover letter).

Seismic monitoring and data processing at Sulphur Mines Salt Dome combines the borehole and surface seismic arrays data for microseismic event processing. This includes the following:

- Nanometrics operates and performs seismic processing for the surface seismic array using broadband network stations. Baker Hughes accesses the real time surface array waveform data and integrates it into the borehole waveform data for processing the microseismic location and magnitude. Baker Hughes provides event locations and magnitudes for all seismic events at Sulphur Mines Salt Dome using the combined borehole arrays and surface array waveform data.

Alert Level Status: Low (Green)

There was no seismic event with a magnitude >0.5 in the AOI and less than 30 MEQ per day in AOI with magnitudes > -1, thus maintaining the defined alert level status at Low (green).

With the borehole arrays, activity sharply increased with 92 detections / 45 located events were observed in March 2026 compared to 59 detections / 24 located events observed in February 2026. It is also noted that the activity level in February 2026 had been low compared to recent months. There were 26 events reported in the AOI. Within AOI caverns: AOI-PPG-07 (5 events)(low), AOI-PPG-06 (4 events)(low), AOI-LGS-02 (3 events)(low), AOI-PPG-02 (3 events)(-0.9 max), AOI-PPG-16 (2 events)(low), AOI-PPG-04 (1 event)(low) along with AOI Caprock (6 events)(low) and AOI-Flank (2 events)(-0.81 max). Outside the AOI in the Flank (18 events)(-0.83 max) and Caprock (1 event)(low). No rockfall events were detected in March 2026. The maximum recorded magnitude of -0.8 in AOI-Flank (3426 ft.) and -0.8 outside of the AOI on the Flank at 4850 feet. The depths of all observed events from 750 ft to 5850 ft.

Baker Hughes

MICROSEISMIC MONITORING MONTHLY REPORT: March 2026

Sulphur Mines Salt Dome – Louisiana (US)

2634299-SUL-MR-260301

Client / Site	Sulphur Mines Salt Dome
Recipient	Trisha Mier (Westlake) Coleman Hale (Lonquist) Andrew Jupe (Altcom)
Reference	2634299-SUL-MR-260301
Period ***from***	2026/03/01
to	2026/03/31

Revision history

Version	Date	Issued by	Verified by	Approved by	Description
1.0	2026/04/15	E. Fortier	G. Regis	JM. Embry	Monthly report

Acronyms

Acronym	Signification
N/A	Not Applicable
PGV	Peak Ground Velocity
AOI	Area Of Interest

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Summary

Network & IT status	**System Uptime**	100 % - Borehole arrays 100 % - Surface Network
	Digitizers connectivity	Continuous, with no acquisition stops
	Sensors / Noise level	• **Borehole arrays**: 100 % ○ **PPG-6** (6 levels) → noise level: 5 to 20 nm/s (RMS) except sensors PPG-6.1Z with 60 nm/s (up to 250 nm/s since 27/01) and PPG-6.2XZ with 100 nm/s since 27/01. ○ **PPG-2** (6 levels) → noise level: 5 to 30 nm/s (RMS) except sensors PPG-2.3 [40 ; 300 nm/s] and PPG-2.6 [20 ; 70 nm/s] • **Surface receivers**: 100 % 6 sensors (3-axis) →N/A
Seismic activity	**BOREHOLE ARRAY**	
	Detections	92
	(of which) Located	45
	Max magnitude	-0.8
	Max PGV	0.0110 mm/s
	Min depth	750 ft
	Max depth	5,850 ft
	Number of alerts in the month	**0 – No alert triggered in March 2026**

PGV = Peak Ground Velocity – Maximum vibration measured on the sensors (mm/s)

Introduction

I. Alert Level Status

During March 2026 the alert level status was: Low (Green). Alert level criteria are listed in Appendix 1.

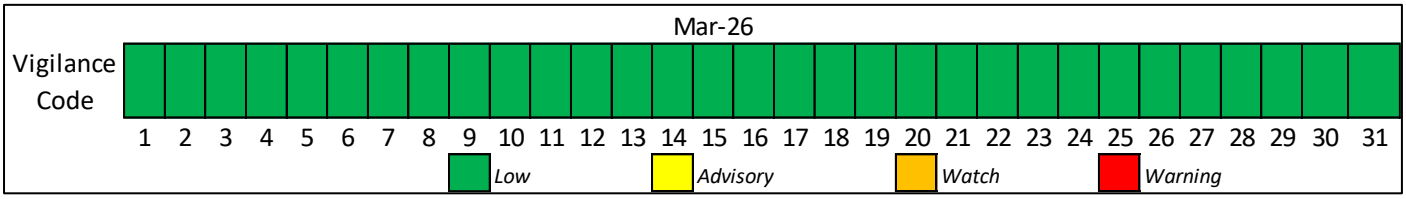

Figure 1: Alert status level during March 2026.

II. Seismic Network

Microseismic monitoring in Sulphur Mine Salt Dome is executed by:

- **Two borehole arrays**
  - Baker Hughes Microseismic Services group operates, and processes data of the borehole seismic arrays located in PPG Well No. 006-X and PPG Well No. 020. The seismic array locations are shown in Figure 2, and the coordinates are listed in the Appendix 2. The borehole arrays were fully functional in April 2024.
- **A surface network, composed of 6 Broadband Trillium sensors**
  - Nanometrics operates the surface broadband array, while Baker Hughes processes the data. The broadband station locations are shown in Figure 2 and listed in Appendix 2.

The processing procedures are described in Appendix 4 (Magnitude calculation) and Appendix 5 (Event location method).

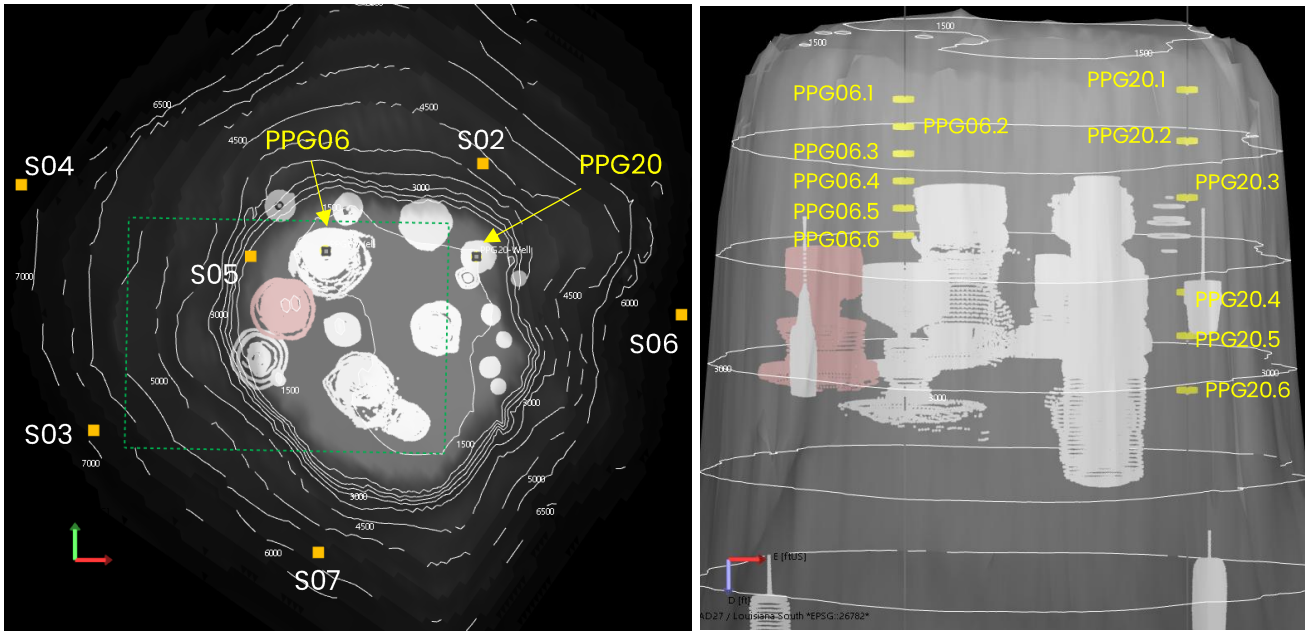

Figure 2: Map (left) and West-East cross section (looking from the South) of the Sulphur Mines Salt Dome. The salt boundary is indicated by grey contour lines. The wellbores with the borehole array sensors are marked by yellow dots for PPG No. 006X and PPG No. 020. Cavern 7 is represented with a red sonar survey. The proposed AOI is indicated on the map view by the green square. The surface network is indicated by the orange squares.

Microseismic activity during reporting period

- In March 2026, 92 seismic events have been detected by the borehole arrays, **45** events had waveform with sufficient signal to noise ratio to compute their location and magnitude.

Amongst the 45 located events:

- 26 are located inside the AOI (Area of Interest) and distributed as follows (Figure 4):
  - 3 events associated with the cavern LGS-02.
  - 3 events associated with the cavern PPG-02.
  - 1 event associated with the cavern PPG-04.
  - 4 events associated with the cavern PPG-06.
  - 5 events associated with the cavern PPG-07.
  - 2 events associated with the cavern PPG-16.
  - 6 events in the caprock.
  - 2 events on the flank of the salt dome.
- 19 events are located outside the AOI and distributed as follows:
  - 1 event on the caprock.
  - 18 events on the flank of the salt dome.

- The maximum magnitude during this period was -0.8, occurring on:
  - 2026/03/06 06:06:32 (CST), on the AOI Flank.
  - 2026/03/09 19:56:32 (CST), on the Flank.

- No rockfall event has been detected in March 2026.

The catalog of the located events is presented in Appendix 3.

I. Distribution of the microseismic event

The histogram below shows the number of locatable and non-locatable events during March 2026

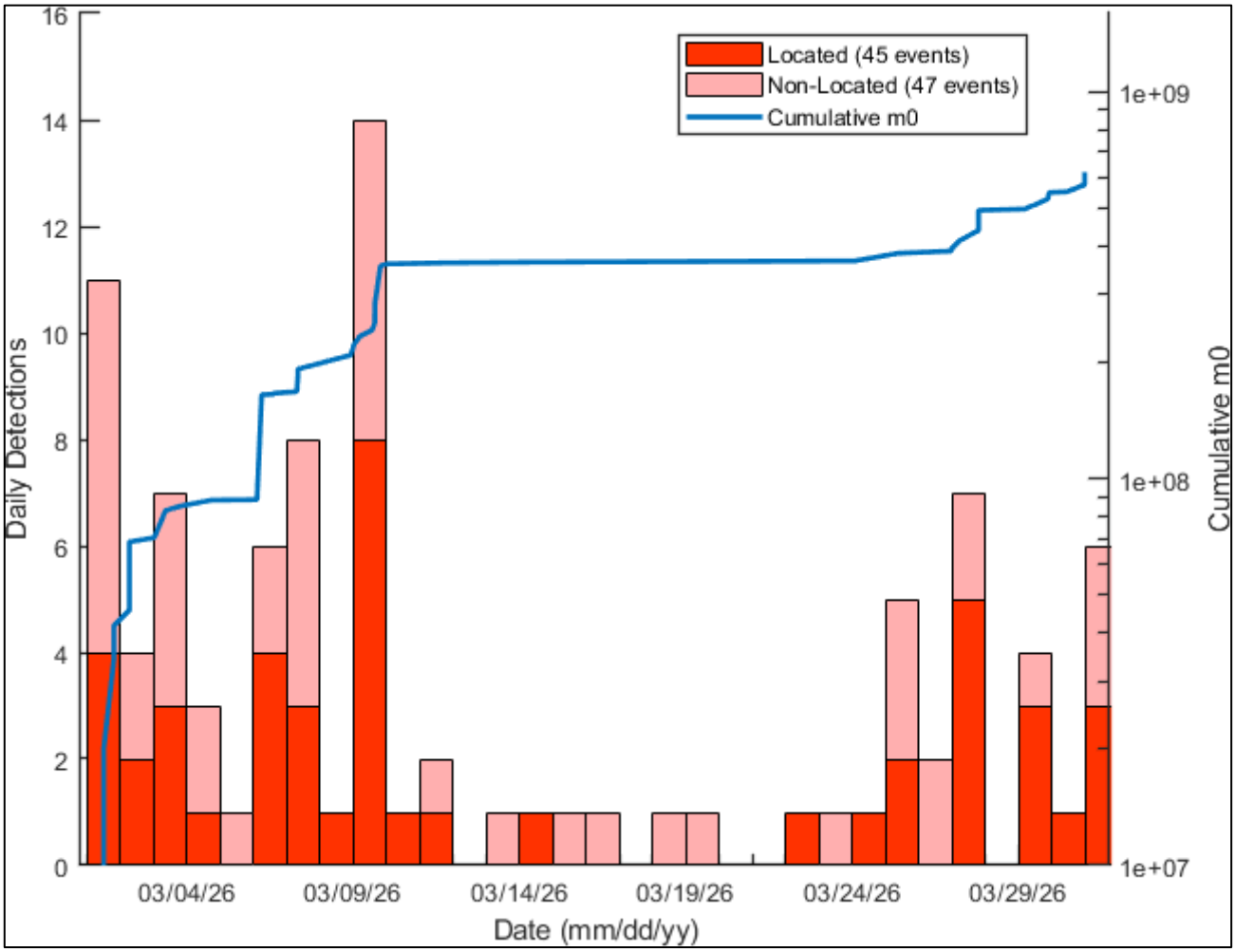

Figure 3: Daily distribution of all events during March 2026. Dark color represents the located events while light one shows the not located events. Blue line represents the cumulative seismic moment Mo for the located events.

Figure 4 shows the distribution of events by area. In March 2026, the seismicity occurred mainly on the flank (18 events). Linked with Figure 5, showing the cumulated seismic energy with respect to the areas, the main release of seismic energy occurred on the Flank (with Mw = -0.8 events).

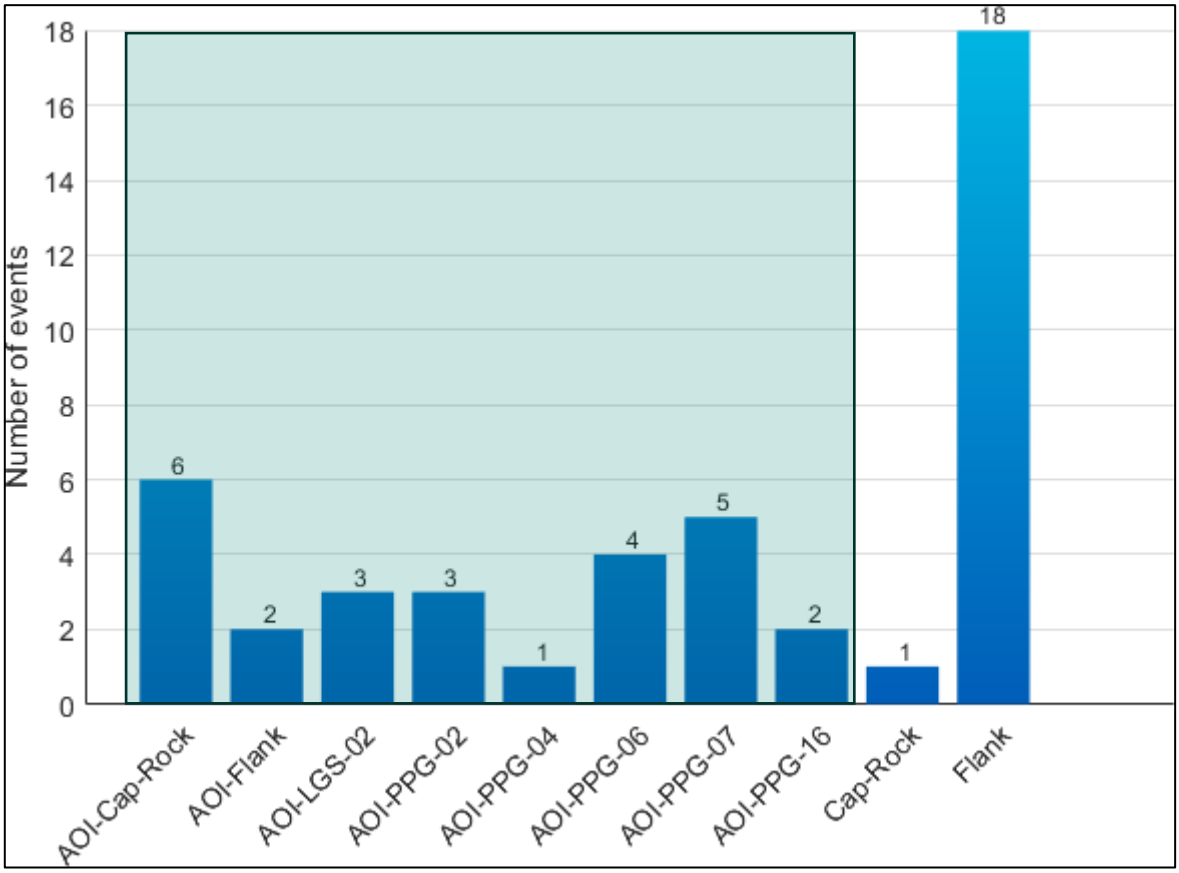

Figure 4: Events distribution by associated cavern. The green rectangle indicates the events in the AOI.

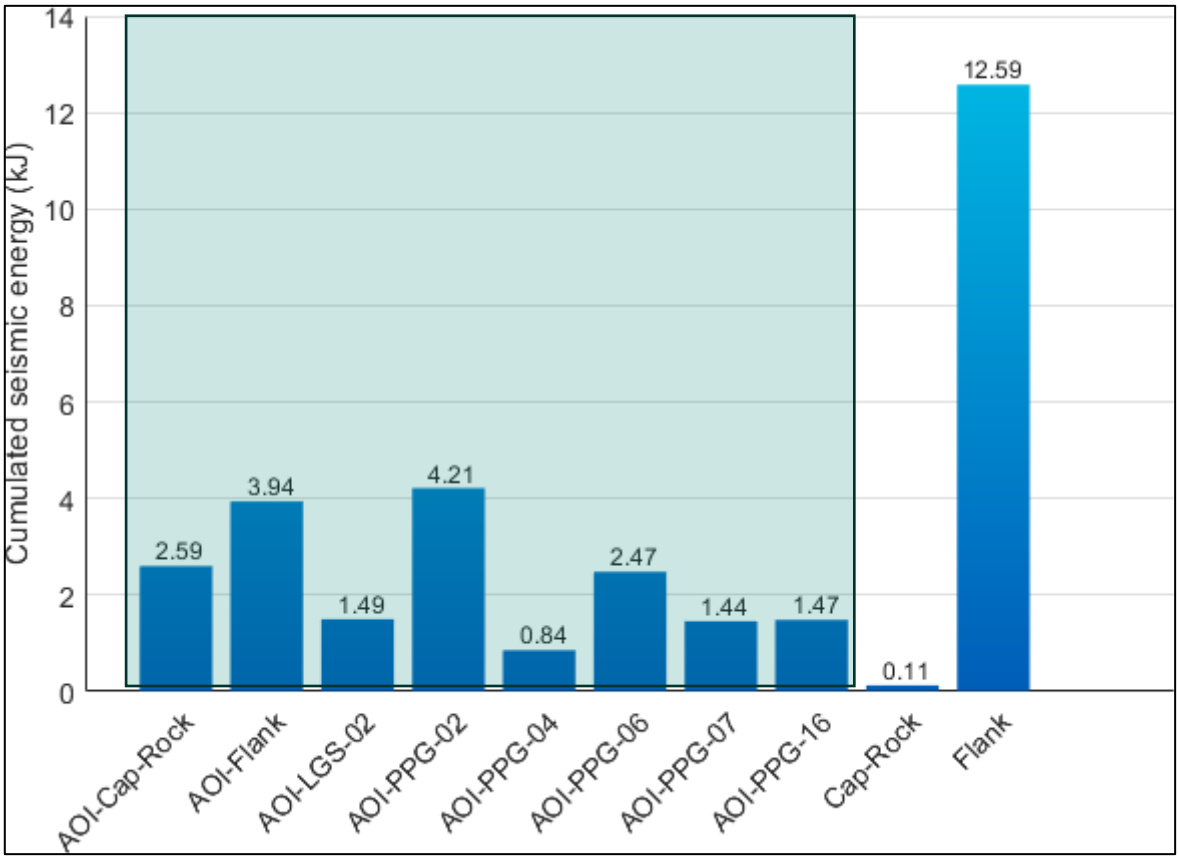

Figure 5: Events energy distribution by cavern. The green rectangle indicates the events in the AOI.

Event Location

The location maps are presented in the report as:

- All events location: inside and outside the AOI (Figure 6 and Figure 7)
- Events located in the AOI (Figure 8, Figure 9, Figure 10).

I. All event locations (inside and outside AOI)

The figures below show the event locations using the borehole arrays.

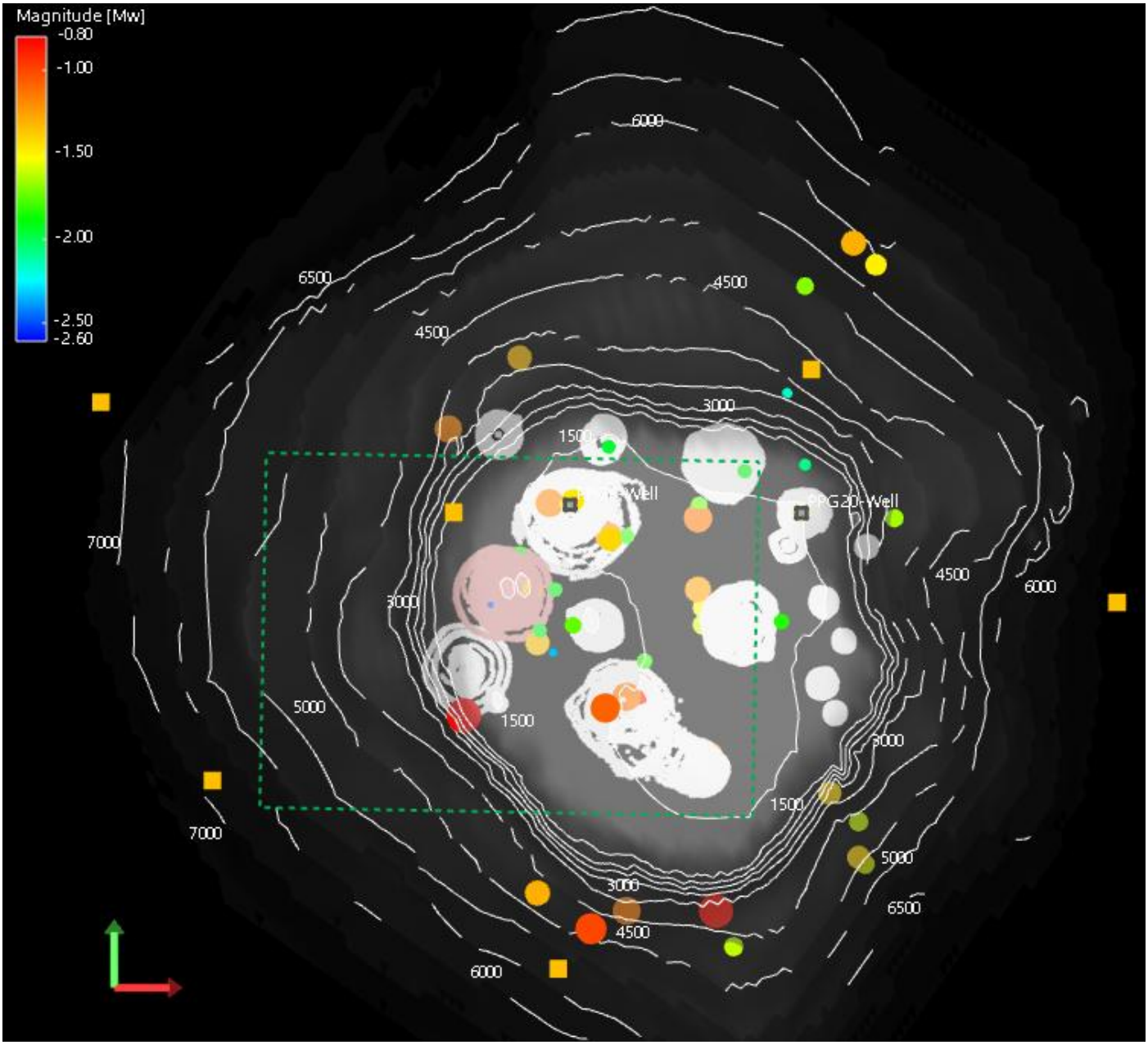

Figure 6: Map of the located events in March 2026. The events are colored, from blue to red, and sized by magnitude; the green rectangle represents the AOI, the orange squares represent the surface stations.

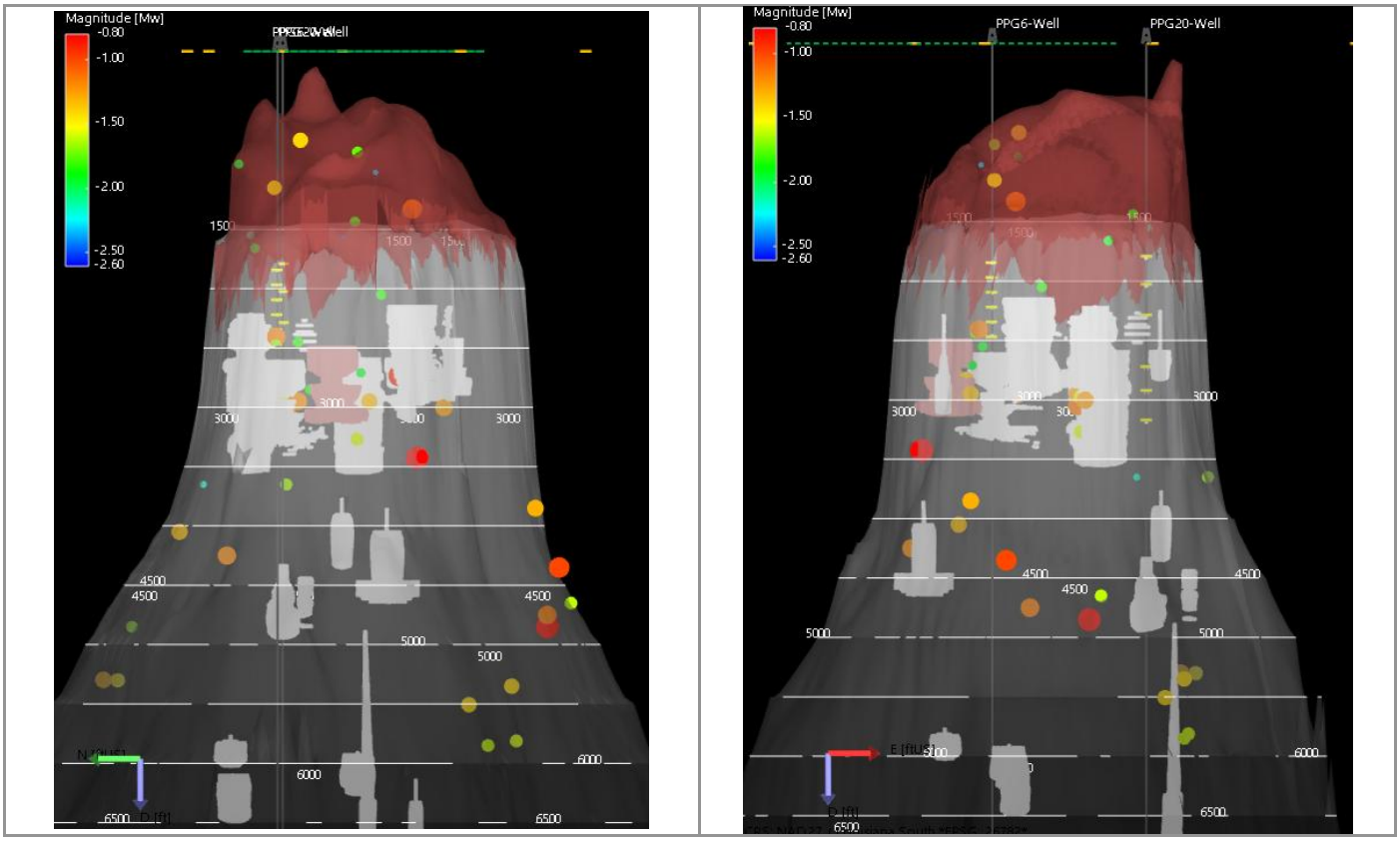

Figure 7: Cross sections N-S (left), looking from the West, and W-E (right) looking from the South. The events are colored, from blue to red, and sized by magnitude.

II. Event Locations in AOI

The figures below show the location of the events inside the AOI.

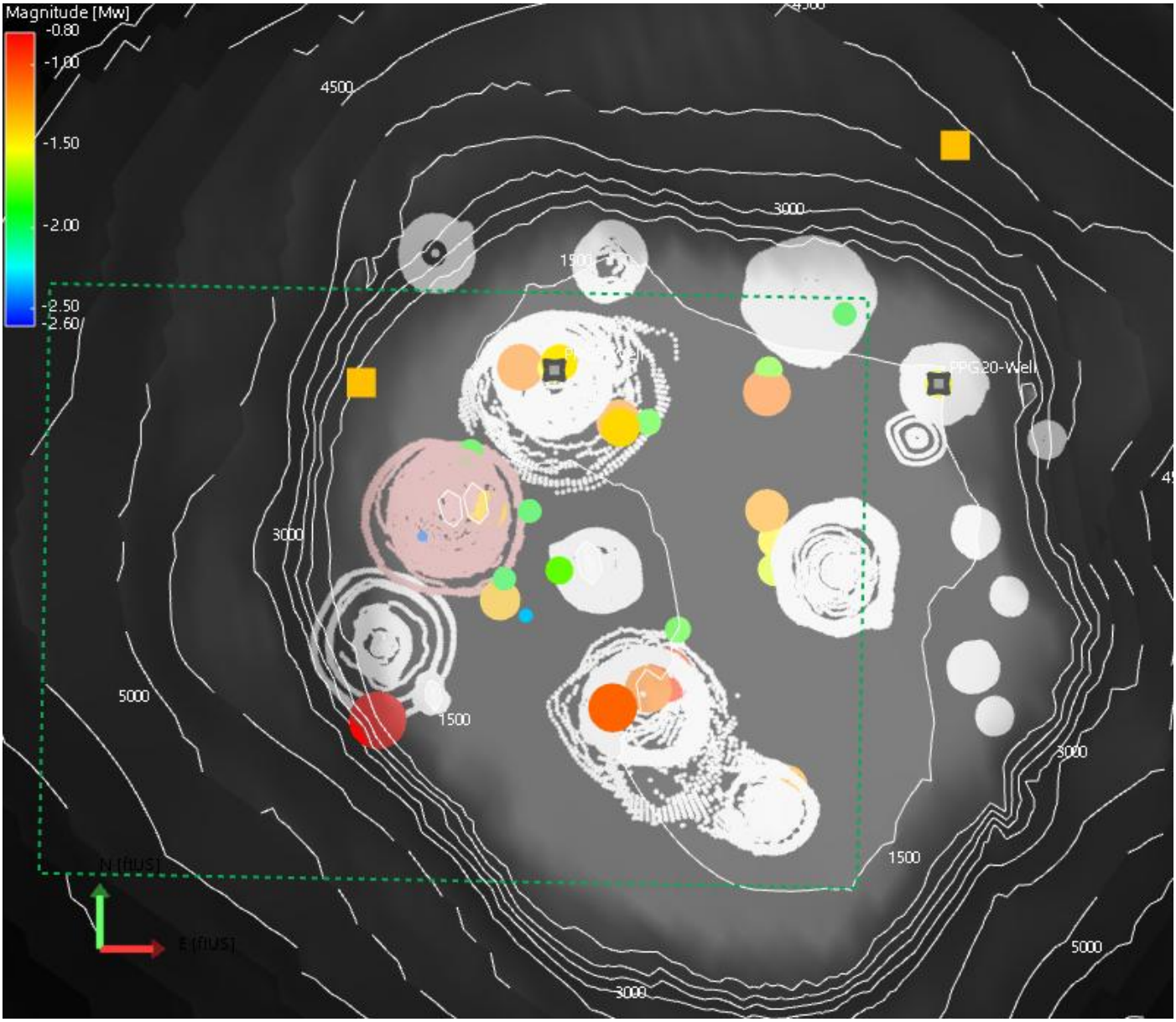

Figure 8: Map of the located events inside the AOI in March 2026. The events are colored, from blue to red, and sized by magnitude; the green rectangle represents the AOI, the orange squares represent the surface stations.

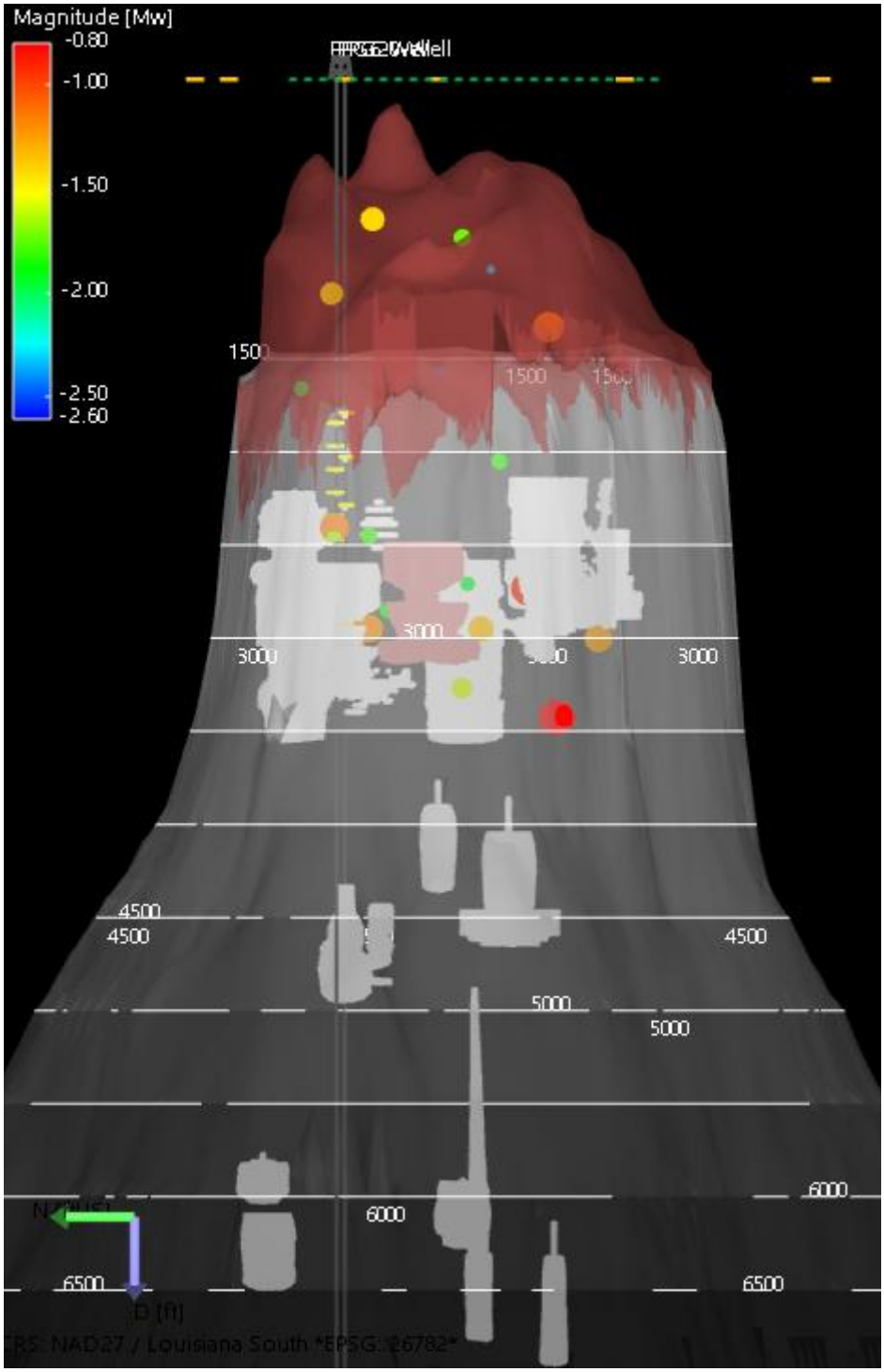

Figure 9: Cross sections N-S (looking from West) of the located events. The events are colored, from blue to red, and sized by magnitude.

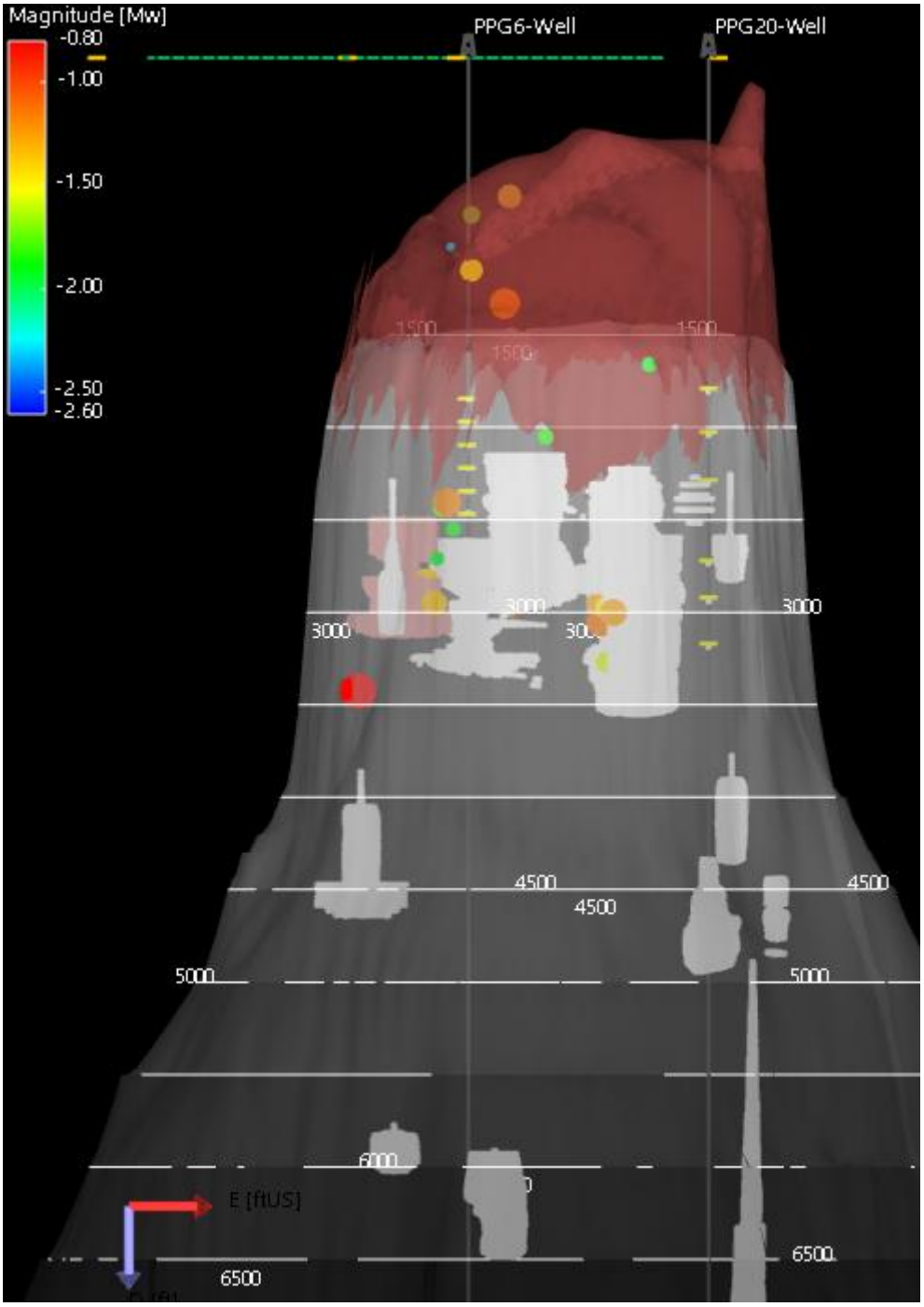

Figure 10: Cross sections W-E (looking from south) of the located events. The events are colored, from blue to red, and sized by magnitude.

Magnitude and depth distribution

The figure below shows the distribution of the moment magnitudes in March 2025. The values vary between -2.5 and -0.8, median value is -1.48.

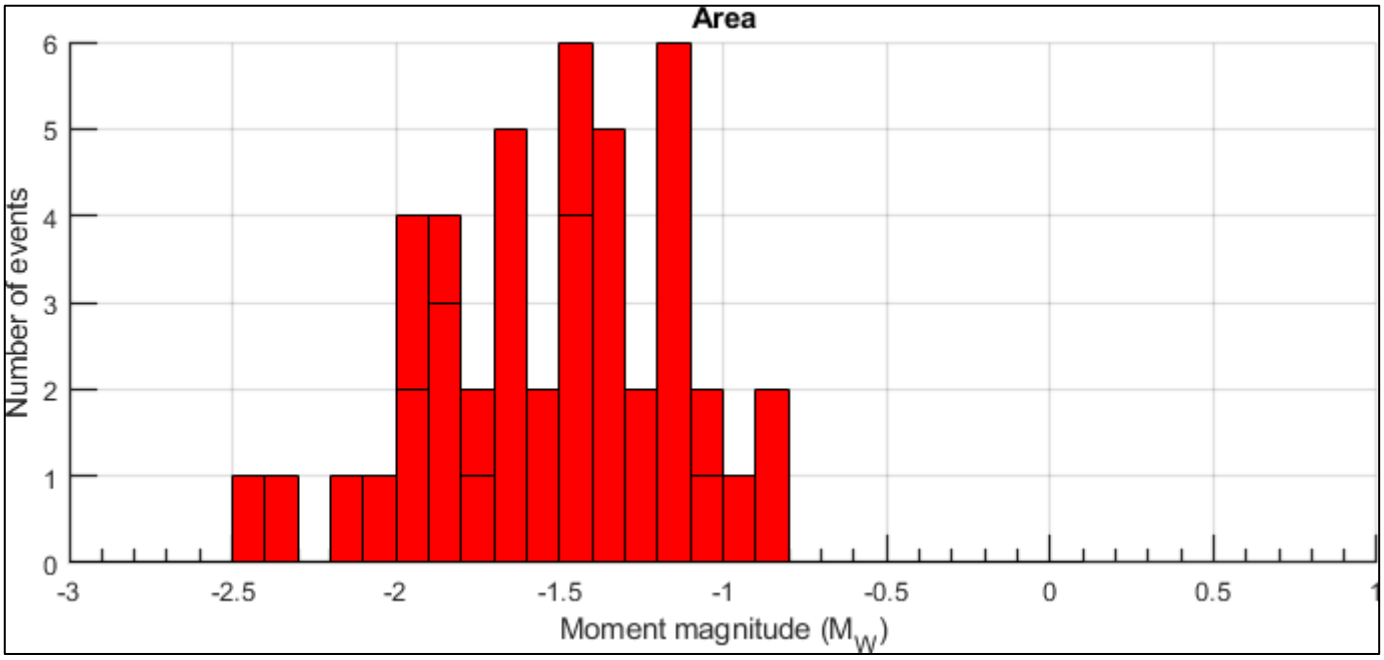

Figure 11: Distribution of magnitudes (Mw) for located events in March 2026.

The figure below shows the depth distribution in March 2026 for all the located events.

Events are located between 750 ft and 5,850 ft. It is possible to distinguish 3 main groups:

- The first one is between 750 ft and 1,660 ft - above the caverns depth and associated with events located in the Caprock or top of Flank.
- A second one between 2,050 ft and 3,269 ft - associated with events located at depth of the caverns.
- A third between 3,426 ft and 5,850 ft - associated with events located at the flank depth.

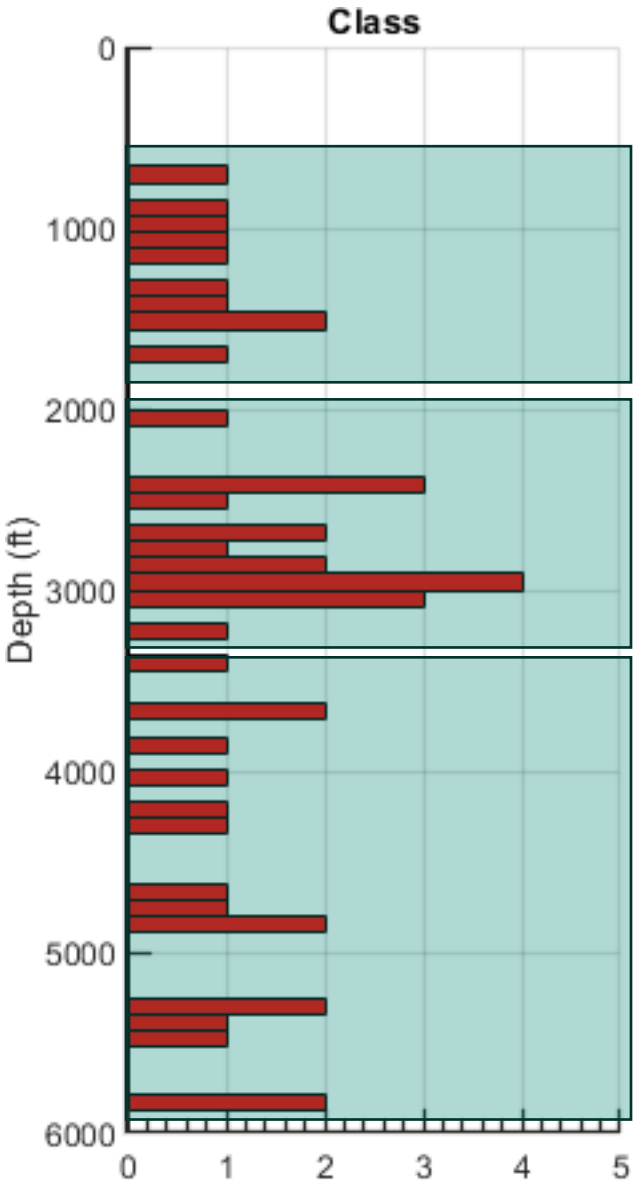

Figure 12: Distribution of the depths for all the located events in March 2026.

Microseismic history from the beginning of the acquisition

I. History of detections.

In March 2026, the total number of detections (located and not-located events) strongly increase with respect to the previous month (92 detected events in March 2026 compared with 59 detected events in February).
The number of located events follows the same trend in March 2026 (45 located events) with respect to February (24 located events).
It is noted however that both the number of detections and located events were low in February 2026 compared to the previous 3 months.

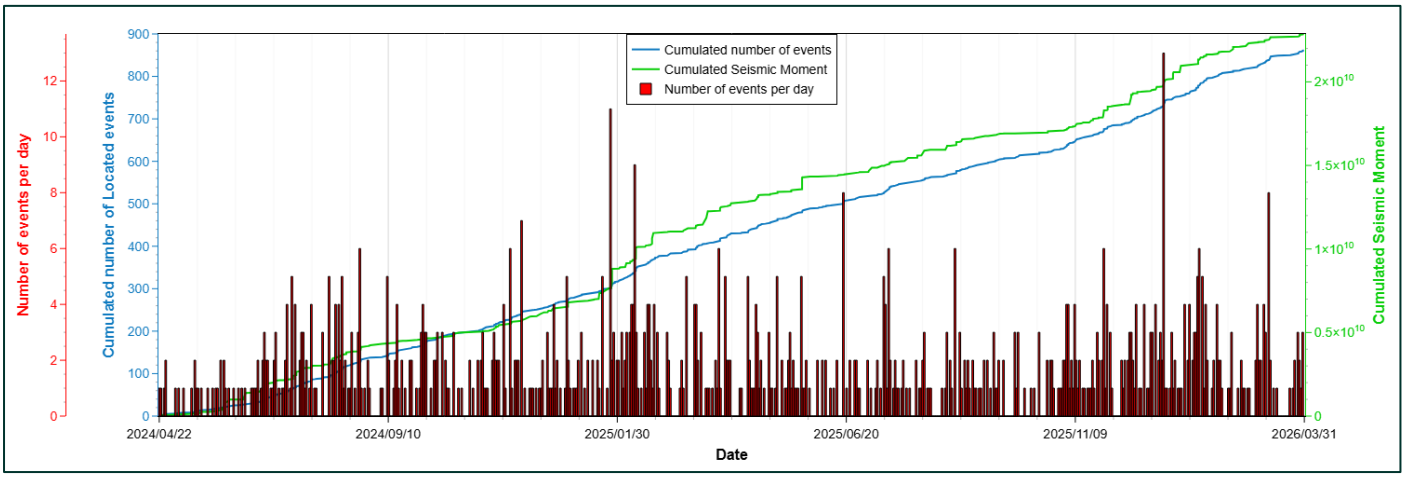

Figure 13: Distribution of the located microseismic events since the beginning of the acquisition on 04/21/2024. Blue line represents the cumulated number of located events. Green line represents the cumulated seismic moment Mo.

II. Historical magnitude distribution.

Figure 14 shows the moment magnitude distribution from the beginning of the acquisition. Dark color bars present the current monthly period and light red color bars present the distribution from the beginning of the acquisition (April 21st, 2024).

From the beginning of the acquisition, events magnitudes are between -2.7 and -0.2 (for 912 located events). The median value of the magnitude from the beginning of the acquisition is -1.47.

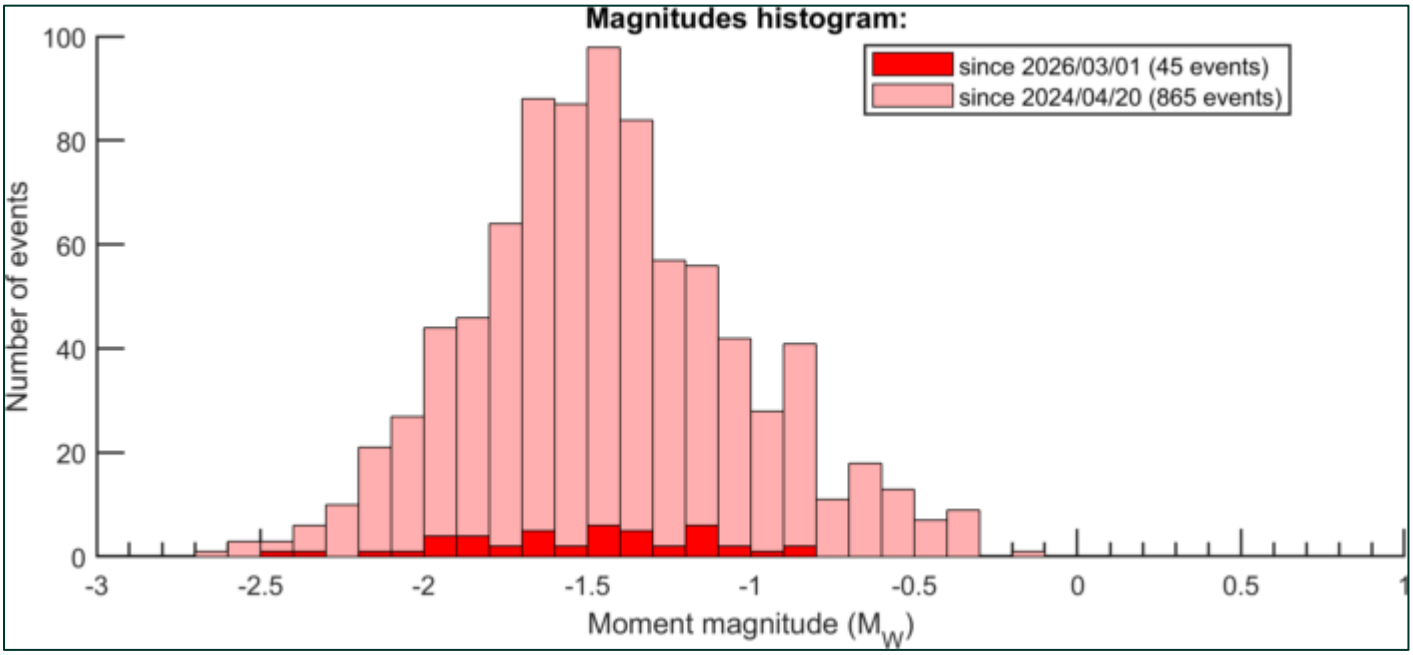

Figure 14: Distribution of magnitude (Mw) for located events. Dark color bars present the current monthly period (March 2026) and light color bars present the distribution from the beginning of the acquisition (from April 21st,2024).

III. History of the event locations.

History in Caprock and on the Flank

The figure below shows the map and cross section of all the events located in the caprock and in the salt flank since April 21st, 2024.

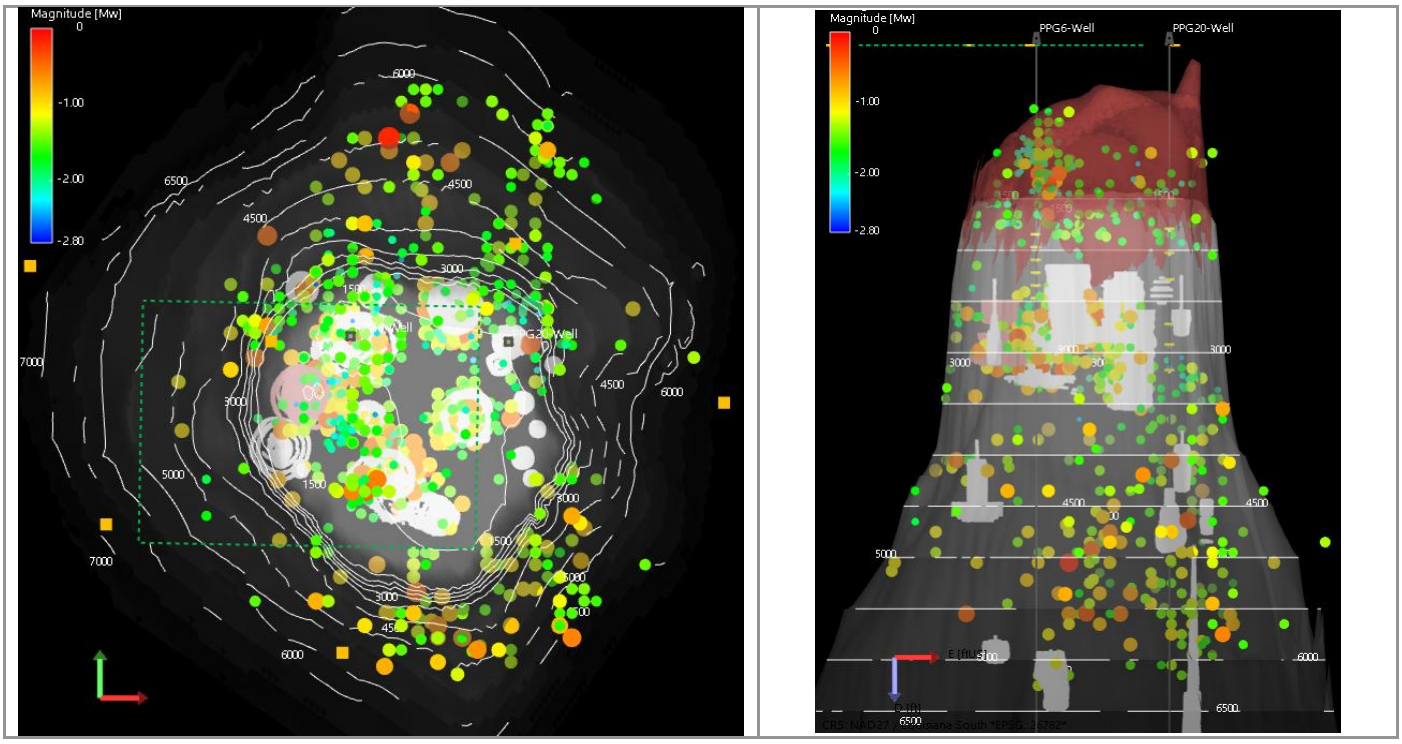

Figure 15: Map view (left) and W-E side view (right) of the cumulative seismicity recorded since the beginning of the acquisition, located in the Cap Rock (red formation) and on the Flank. Green rectangle represents the AOI area. The events are colored, from blue to red, and sized by magnitude.

History around the caverns

The figures below show the history of the events associated with the caverns since the beginning of the acquisition (April 21st, 2024).

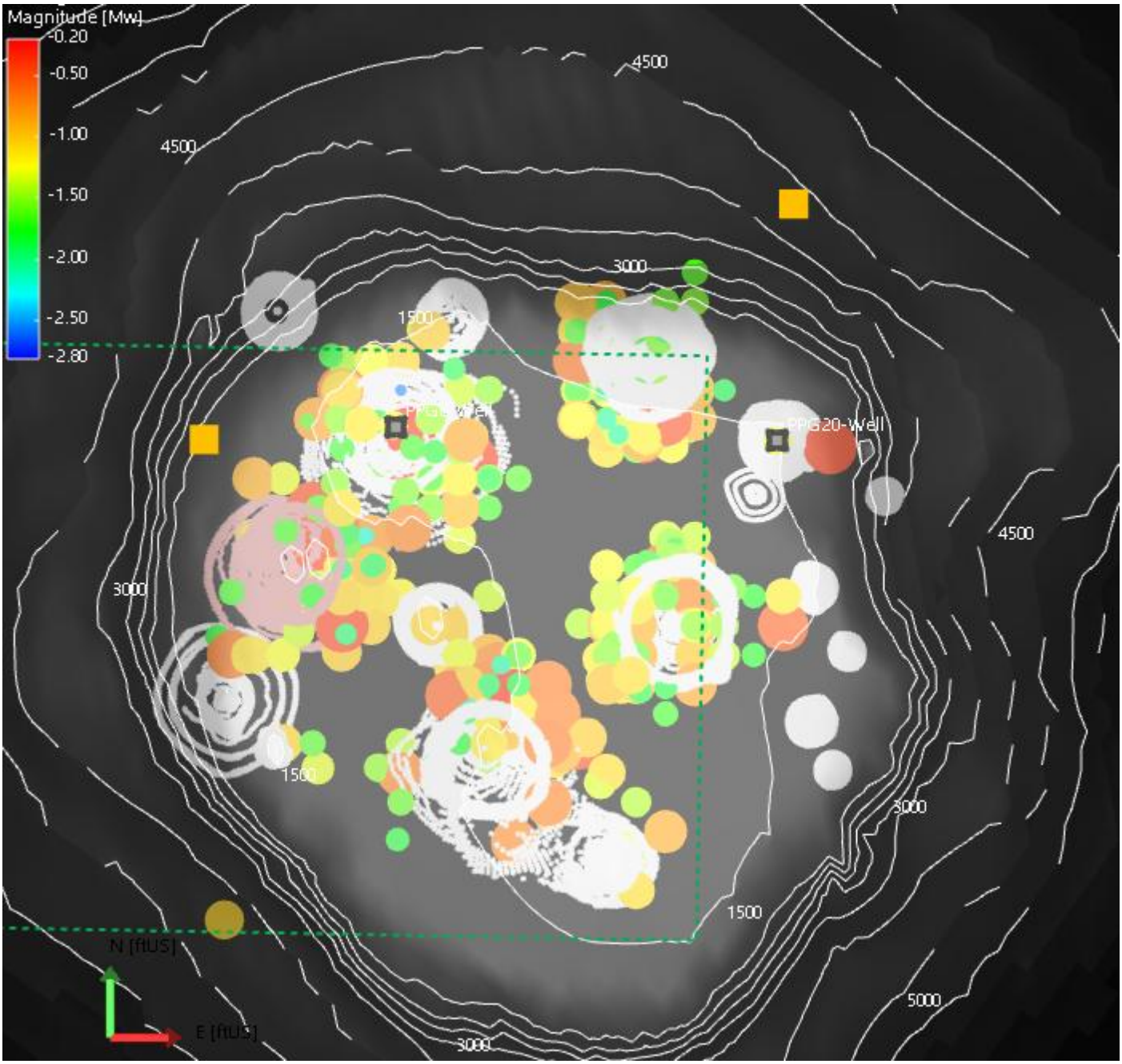

Figure 16: Map view of the events located in proximity to the caverns since the beginning of the acquisition (April 21st, 2024). The events are colored, from blue to red, and sized by magnitude.

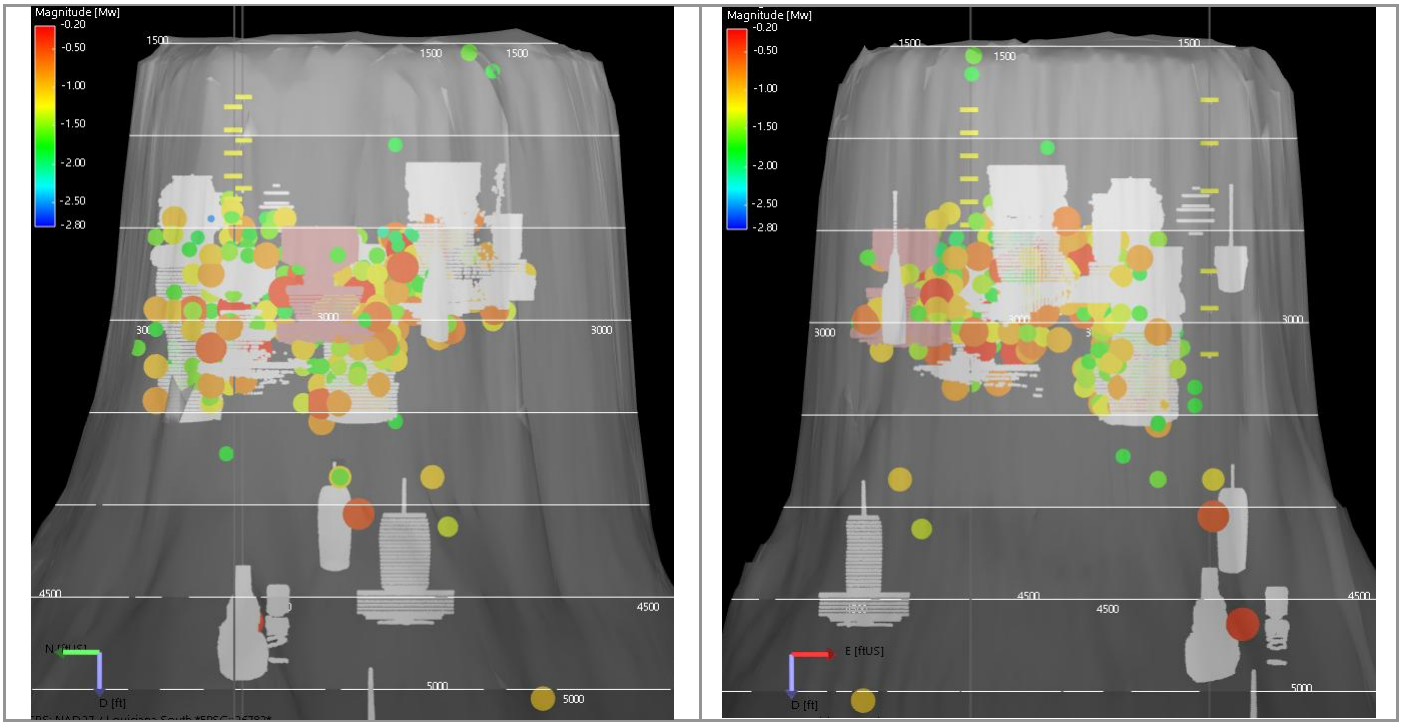

Figure 17: Cross sections W-E (right), looking from the South; and N-S (left), looking from the West of the events located close to the caverns since the beginning of the acquisition. The events are colored, from blue to red, and sized by magnitude.

APPENDIX 1 – Alert level criteria

Proposed Microseismic Alert Level Criteria and Response for Sulphur Mines Dome.

Alert Status	Criteria	Response
Low (GREEN)	No events with magnitude ≥0.5 in AOI and/or Less than 30 MEQ per day in AOI with magnitudes ≥ -1	Once per week data processing, with previous monthly microseismic activity summary in the AOI is provided by the 15th of the following month to LDNR IMD.
Advisory (YELLOW)	Event with magnitude ≥0.5 and <1.0 in AOI and/or Count of MEQ per day ≥30 and <40 in AOI with magnitudes ≥ -1	Daily data processing M-F. Weekly reporting is provided LNDR IMD with activity summary from the previous week. Status remains active until seismic levels within the AOI reach "low"(green) level for 1 day.
Watch (ORANGE)	Event with magnitude ≥1 and <1.5 in AOI and/or Count of MEQ ≥40 and <50 with magnitudes ≥ -1 in AOI	Seven days per week data processing, 2x week reporting with activity for the previous days is provided via email and text message notifications to IMD. Status remains active until seismic levels within the AOI reach Advisory or Low criteria for 2 consecutive days.
Warning (RED)	Event with magnitude ≥1.5 in the AOI and/or Count of MEQ ≥50 with magnitudes ≥ -1 in the AOI	Seven days per week data processing, daily reporting with online meetings with stake holders as needed. The warning status level remains active until seismicity levels within the AOI reach a lower status level for 2 consecutive days.

APPENDIX 2 – Network Coordinates

Borehole arrays coordinates:

Wellbore	Sensor	TVD SS	Easting (ft)	Northing (ft)
PPG 6x	Tool 1	1844	1343141	583425
PPG 6x	Tool 2	1969	1343141	583425
PPG 6x	Tool 3	2094	1343141	583425
PPG 6x	Tool 4	2219	1343141	583425
PPG 6x	Tool 5	2344	1343141	583425
PPG 6x	Tool 6	2469	1343141	583425
PPG 20	Tool 1	1790	1344445	583372
PPG 20	Tool 2	2025	1344445	583372
PPG 20	Tool 3	2285	1344445	583372
PPG 20	Tool 4	2720	1344445	583372
PPG 20	Tool 5	2920	1344445	583372
PPG 20	Tool 6	3170	1344445	583372

Surface network coordinates:

Station	LAT WGS84	LON WGS84	Date start	Date end
Temp_1a	30.2575	-93.4123	1/30/2023	2/9/2023
Temp_1b	30.2534	-93.4135	2/9/2023	4/3/2023
Temp_2a	30.2570	-93.4097	1/30/2023	2/9/2023
Temp_2b	30.2555	-93.4132	2/9/2023	2/27/2023
Temp_2c	30.2547	-93.4138	2/27/2023	4/5/2023
Temp_3a	30.2533	-93.4091	1/30/2023	2/9/2023
Temp_3b	30.2563	-93.4146	2/9/2023	4/5/2023
Temp_4a	30.2486	-93.4123	1/30/2023	2/27/2023
Temp_4b	30.2507	-93.4121	2/27/2023	3/8/2023
Temp_4c	30.2506	-93.4100	3/8/2023	3/15/2023
Temp_4d	30.2503	-93.4119	3/15/2023	est 4/3/2023
Temp_5a	30.2502	-93.4156	1/30/2023	2/27/2023
Temp_5b	30.2507	-93.4153	2/27/2023	3/15/2023
Temp_5c	30.2504	-93.4140	3/15/2023	est 4/3/2023
Temp_6a	30.2532	-93.4166	1/30/2023	3/15/2023
Temp_6b	30.2529	-93.4161	3/15/2023	4/4/2023
Temp_7a	30.2547	-93.4161	1/30/2023	4/3/2023
Semi Perm S01	30.2453	-93.4073	4/4/2023	
Semi Perm S02	30.2571	-93.4098	4/6/2023	
Semi Perm S03	30.2536	-93.4091	4/6/2023	
Semi Perm S04	30.2470	-93.4213	4/5/2023	5/12/2023
Semi Perm S04_1	30.2506	-93.4204	5/12/2023	
Semi Perm S05	30.2564	-93.4224	4/5/2023	
Semi Perm S06	30.2532	-93.4167	4/5/2023	
Semi Perm S07	30.2547	-93.4162	4/5/2023	
SUL01 trillium	30.2452	-93.4071	9/20/2023	3/12/2024
	LAT NAD 83	LON NAD 83		
SUL02 trillium	30.2570	-93.4098	9/13/2023	
SUL03 trillium	30.2505	-93.4203	9/12/2023	
SUL04 trillium	30.2563	-93.4224	9/12/2023	
SUL05 trillium	30.2547	-93.4161	9/13/2023	
SUL06 trillium	30.2535	-93.4043	3/12/2024	
SUL07 trillium	30.2477	-93.4141	3/12/2024	

Seismic Station locations and operational dates at Sulphur Mines Dome (to November 1, 2024).

Temporary Station locations and start and end dates provided by Westlake.

Trillium Station locations provided by Nanometrics and Westlake (Trillium SUL 02-07).

APPENDIX 3 - Catalogue of located events

#	Event origin time CST(UTC-5)	Easting (ft)	Northing (ft)	Depth (ft)	ΔEasting (ft)	ΔNorthing (ft)	ΔDepth (ft)	Mw	Detected by
1	03/01/2026 11:54:40.377	1344604	581804	5507	635	1108	1084	-1.40	Flank
2	03/01/2026 11:54:50.218	1344766	581444	5350	871	3162	2598	-1.40	Flank
3	03/01/2026 19:18:20.125	1344738	584885	5297	877	3191	2604	-1.30	Flank
4	03/01/2026 19:18:31.036	1344863	584764	5301	424	1202	903	-1.48	Flank
5	03/02/2026 06:31:08.073	1343010	583431	2433	639	1881	1385	-1.66	AOI-PPG-06
6	03/02/2026 06:31:17.994	1343034	583429	2406	434	1492	652	-1.16	AOI-PPG-06
7	03/03/2026 00:27:32.433	1343066	582944	2550	1302	2503	2128	-1.91	AOI-PPG-07
8	03/03/2026 08:36:10.258	1342966	582644	2950	331	1516	713	-1.34	AOI-PPG-07
9	03/03/2026 19:05:28.134	1344334	582765	1437	331	1544	728	-1.83	Caprock
10	03/04/2026 17:43:46.093	1343166	582744	850	377	912	610	-1.74	AOI-Caprock
11	03/06/2026 02:46:02.587	1342704	582859	1560	999	3100	1698	-2.46	AOI-Caprock
12	03/06/2026 06:06:32.230	1342553	582239	3426	972	3041	1642	-0.81	AOI-Flank
13	03/06/2026 14:20:50.029	1343053	582592	1022	369	890	781	-2.32	AOI-Caprock
14	03/06/2026 14:59:29.809	1344466	583644	1550	974	2213	1718	-2.07	Flank
15	03/07/2026 07:35:10.060	1342980	582715	2709	426	1562	672	-1.93	AOI-PPG-07
16	03/07/2026 08:20:41.623	1343866	582944	2950	345	878	438	-1.25	AOI-LGS-02
17	03/07/2026 08:20:46.433	1343896	582846	2973	680	1494	1130	-1.49	AOI-LGS-02

#	Event origin time CST(UTC-5)	Easting (ft)	Northing (ft)	Depth (ft)	ΔEasting (ft)	ΔNorthing (ft)	ΔDepth (ft)	Mw	Detected by
18	03/08/2026 22:33:05.232	1343931	582015	3002	226	676	541	-1.25	AOI-PPG-04
19	03/09/2026 01:01:32.513	1342966	581244	3850	743	3227	1517	-1.30	Flank
20	03/09/2026 05:21:16.021	1342922	582947	2829	753	3100	1289	-1.37	AOI-PPG-07
21	03/09/2026 13:51:25.052	1343166	583444	1150	829	3150	1310	-1.46	AOI-Caprock
22	03/09/2026 15:47:11.978	1343372	583225	750	223	730	385	-1.41	AOI-Caprock
23	03/09/2026 15:53:42.091	1344128	583608	1660	230	749	400	-1.90	AOI-Flank
24	03/09/2026 15:59:16.143	1343866	583344	3050	236	698	385	-1.12	AOI-PPG-16
25	03/09/2026 15:59:24.720	1343872	583418	3033	844	1722	759	-1.74	AOI-PPG-16
26	03/09/2026 19:56:39.240	1343966	581144	4850	642	1048	493	-0.83	Flank
27	03/10/2026 00:10:27.169	1344066	580944	4650	774	2911	1899	-1.61	Flank
28	03/11/2026 19:39:19.830	1343466	583244	2450	449	1846	1258	-1.82	AOI-PPG-06
29	03/14/2026 12:10:47.059	1343366	583744	950	438	921	860	-1.95	Flank
30	03/22/2026 02:07:31.899	1342866	583144	2850	382	884	794	-1.85	AOI-PPG-07
31	03/24/2026 02:45:10.750	1344366	584044	3650	341	1165	711	-2.16	Flank
32	03/25/2026 02:57:41.374	1342866	584244	4050	274	732	426	-1.33	Flank
33	03/25/2026 10:28:50.607	1344966	583344	3650	479	1443	626	-1.65	Flank
34	03/27/2026 00:45:27.081	1344766	581644	5850	852	2008	1787	-1.60	Flank
35	03/27/2026 00:45:49.100	1344802	581406	5811	528	924	599	-1.59	Flank
36	03/27/2026 06:40:40.588	1343366	583244	2950	461	1585	631	-1.20	AOI-PPG-06

#	Event origin time CST(UTC-5)	Easting (ft)	Northing (ft)	Depth (ft)	ΔEasting (ft)	ΔNorthing (ft)	ΔDepth (ft)	Mw	Detected by
37	03/27/2026 20:19:51.814	1343466	582344	2650	308	990	588	-1.13	AOI-PPG-02
38	03/27/2026 20:19:57.058	1343525	582391	2732	668	1373	1294	-0.90	AOI-PPG-02
39	03/29/2026 05:49:53.600	1344466	584644	4850	404	798	626	-1.69	Flank
40	03/29/2026 22:19:23.597	1343346	582281	1330	292	461	399	-1.08	AOI-Caprock
41	03/29/2026 23:22:34.646	1342466	583844	4250	306	477	403	-1.18	Flank
42	03/30/2026 12:11:17.452	1343566	582544	2050	948	2725	1474	-1.82	AOI-PPG-02
43	03/31/2026 01:00:45.718	1343466	581144	4750	936	2839	1507	-1.15	Flank
44	03/31/2026 01:00:54.285	1343266	581044	4350	958	2881	1607	-1.00	Flank
45	03/31/2026 01:01:00.063	1343891	582747	3269	934	2835	1514	-1.57	AOI-LGS-02

APPENDIX 4 - Computation of Moment Magnitude

Magnitudes are computed from S wave displacement spectra.

The moment magnitude formula was proposed by Hanks and Kanamori (1979) to provide an earthquake strength scale based on the seismic radiated energy, preventing it from being impacted by any saturation artifact at elevated magnitudes. This moment magnitude M_W is defined as below:

$$M_W = \frac{2}{3}(\log_{10} M_0 - 9.1)$$

Where M_0 (scalar seismic moment) is expressed in N.m.

NB: If M_0 is expressed in dyne.cm, then the relation becomes $M_W = \frac{2}{3}(\log_{10} M_0 - 16.1)$.

The scalar seismic moment M_0, expressed in Newton meter (N.m), is defined as:

$$M_0 = \frac{4\pi\rho_0 c^3 r\, \Omega_0}{F_c R_c S_c}$$

where:

ρ_0 is the density of the source material in kg.m^{-3}

c is the wave velocity at the source location, i.e. P- or S-wave velocity in m.s^{-1}

r is the geometrical spreading from the source to the receiver. In a homogeneous model, it corresponds to the seismic source-receiver distance in m

Ω_0 is the low-frequency asymptote of the displacement spectrum, in m.s

F_c is a radiation coefficient for either P- or S-waves, no unit

R_c is a free-surface amplification coefficient for P- or S-waves, no unit.

Note that $R_c = 1$ is adapted for deep borehole sensors, and that $R_c = 2$ is adapted for SH-waves recorded at sensors deployed on the ground surface. R_c also depends on the incidence angle and on the frequency contents of P- and SV-waves arrivals at surface sensors.

S_c is a site correction coefficient for P- or S-waves, no unit. Without a proper knowledge, this term can be neglected, i.e. $S_c = 1$.

We estimate M_0 from the low-frequency level Ω_0 of the seismic displacement spectrum (S-waves). The displacement spectrum is obtained by integrating velocity signals in a time-window specified by the analyst.

The anelastic attenuation is characterized by $t^* = t_{ij}/Q$, with t_{ij} being the travel-time of seismic waves from a source i to a receiver j and Q being the quality factor (i.e. high-Q means low attenuation, while low-Q means high attenuation).

Our method uses a further approximation of this model, as proposed by (Boatwright, 1978). This later model preserves the f^{-2} falloff, while including a sharper transition around the corner frequency:

$$|U(f)| = \frac{\Omega_0}{\left[1 + \left(\frac{f}{f_c}\right)^{2\gamma}\right]^{1/\gamma}} e^{-\pi f t^*}$$

Thae moment magnitude is computed by spectrum fitting, minimizing the observed spectrums with the formulation. Plateau value is a scale factor, the shape of the spectrum is determined by f_c, γ and t^*. These parameters are inversed considering all S-wave spectrums together.

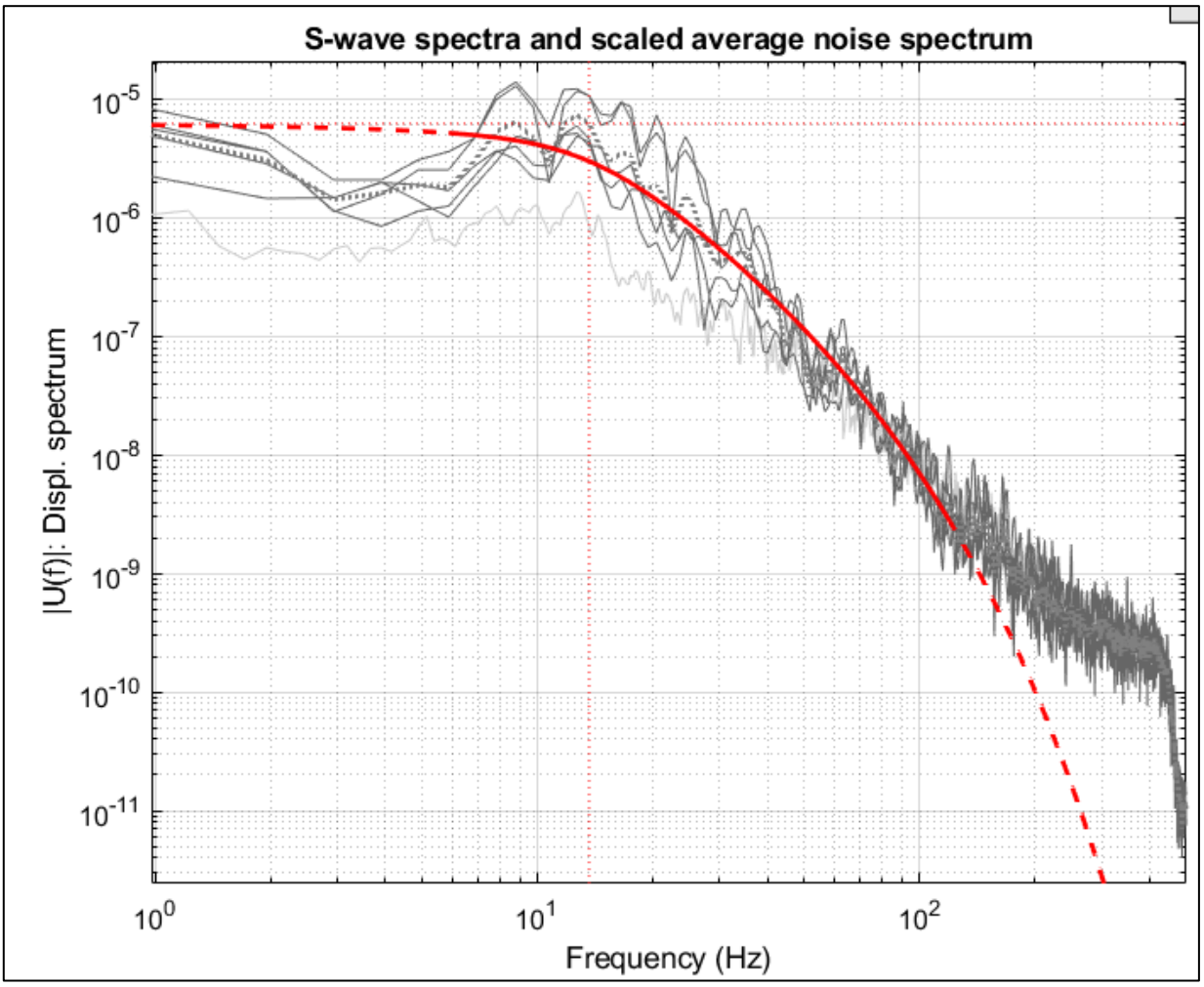

Figure 18 :Example of computed S-wave spectra and scaled noise spectra.

APPENDIX 5 - Location method

The locations are computed using to the Eikonal 3D code (Podvin & Leconte, 1991) using a ray tracing in the updated 3D model and P&S direct arrival times. A quality control of the location uses the different travel times of each sensor for hypocenter computation. The polarization analysis (incidence angle on the P wave) helps us to choose the reliable solution on the two possible locations (only 2 antennas). For the ellipse of uncertainties, the locations are quantified by a Probability Density Function (PDF). The maximum of the PDF points to the source location; a 68.3 % confidence level defines the location uncertainty. The confidence volume shape is fitted with an ellipsoid described by the length and direction of the 3 axes. An uncertainty on P and S-waves picking is defined as half of the wave period.