Surface Seismic Monitoring Report
Sulphur Mines Salt Dome Broadband Seismic Array
Event Location and Magnitude

Report Date: June 26, 2024

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Using results from Nanometrics

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Summary Event Location and Magnitude

- Date: June 24, 2024
  - Time 14:14:24 CDT
  - Magnitude estimates -0.96 (surface array), -0.7 (borehole array)
  - Borehole Location (ft): X 1343552, Y 582007 ; (NAD27 LA South St Pl), Depth -2946 ft msl
  - Borehole Event Uncertainties: ΔX ±442 ft, ΔY Vertical ±1873 ft ΔZ ± 893 ft

Comments: The borehole location for this event locates at the base of PPG 002 cavern. The surface array places the event in the salt dome, west of the borehole event location. The borehole location is considered the higher resolution location and is used for this report.

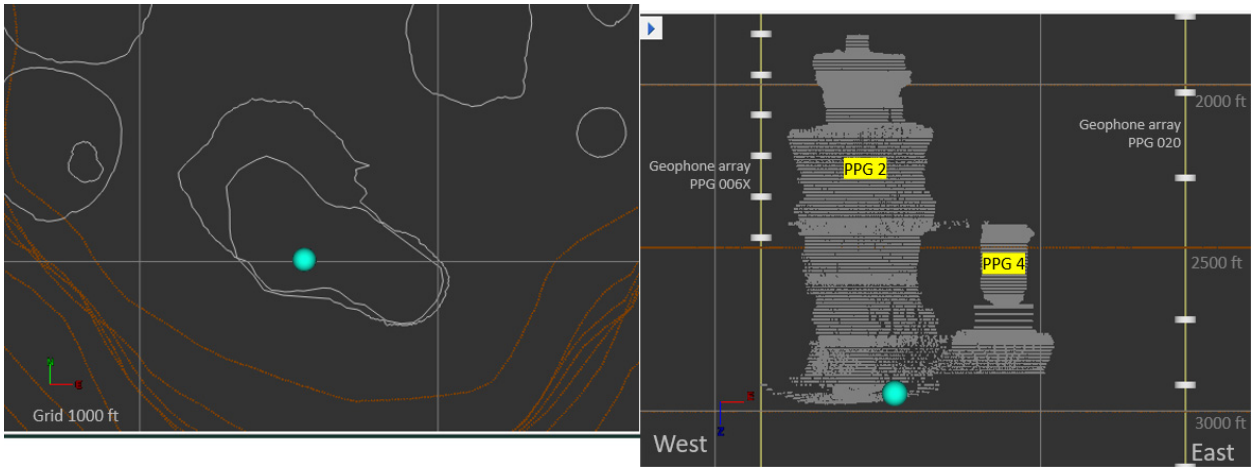

Figure 1. Map (left) and West-East vertical cross section (looking from south). The cyan sphere is the June 24 event location. Map view shows cavern outlines. Map and cross section show salt contours in orange. Grid is 1000 ft for both figures. Cross section shows sonar for PPG 02 and PPG 04 caverns, and the borehole geophone positions in PPG 06X and PPG 020 wellbores.

Event location uncertainties. The Baker Hughes processing group uses only the P- and S-wave travel-times from both borehole arrays to estimate the event uncertainties (Figure 2). The P- and S-wave polarization provides an azimuth to each event which greatly reduces the event uncertainties, in this case in particular the ΔY direction (reported uncertainty is ±1873 ft). The additional of the azimuthal

information greatly reduces this uncertainty, however it is not currently reported with this included. We continue to refine the data processing results for both the surface and borehole seismic arrays.

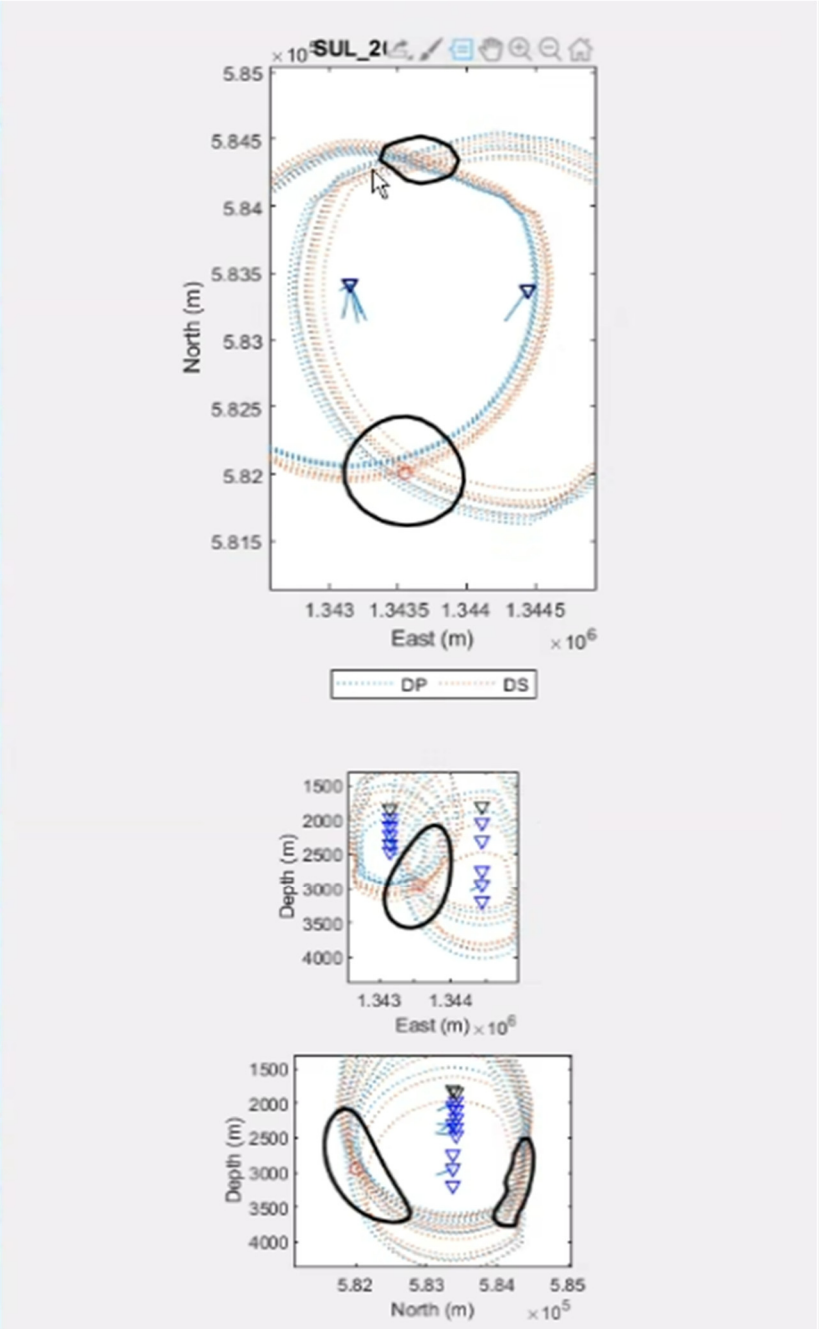

Figure 2. Plots of event uncertainties using travel times for the June 24 seismic event obtained from borehole processing provided by Baker Hughes. The dots indicate P-S travel times for both arrays, the upper plot is a map view and the lower plots are the E-W side view (middle plot) and N-S side view (lower plot). Note these uncertainties estimates do not include the azimuthal measurements from P- and S-waves, indicated by the short bars the sensor positions (triangles show in each plot).